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SALARIES

OF

SCIENTISTS • ENGINEERS AND TECHNICIANS

··· A Summary Of Salary Surveys ···

Prepared by

SCIENTIFIC MANPOWER COMMISSION

1776 Massachusetts Avenue, N.W., Washington, D.C. 20036

NOVEMBER 1983

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ELEVENTH EDITION

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INTRODUCTION

Salary surveys are conducted by a number of organizations, including agencies and departments of the federal government, professional scientific and engineering organizations, educational associations, magazine publishers, and other professional and trade associations. While some surveys deal directly with salaries of scientists and engineers, others cover much broader occupational categories. Most salary surveys conducted by professional scientific and engineering societies cover only their membership. However, since such societies generally represent the majority of the population in their particular discipline, the results may be generalized to these professional populations. Some smaller salary surveys in specific disciplines are included for comparative purposes, as are surveys in occupations not specifically science and/or engineering.

Although most of the salary data presented in this report are available from the original sources, this compilation brings together the information from a variety of sources both for purposes of comparison and for easier accessibility.

For a number of reasons, exact correlation of results of different surveys is generally not possible without access to the original data, and may not be even then because of the different methodologies employed when carrying out the survey and the differing populations surveyed. The statistical bases used in survey reports include medians, means, percentiles and ranges of one of these, which are not directly comparable. In addition to the "snapshot" characteristics of surveys, which provide information as of any given date, the time periods covered by the surveys include calendar year, fiscal year, academic year, and quarterly segments starting at various points in the year. The base and time period for each table is noted with the table and/or in the introductory statement for the section in which it appears.

Where comparisons of similar data are possible, some apparent discrepancies appear. Although no attempt has been made to evaluate the relative reliability of the data, the number of people included in the statistics presented is given when known. In some cases, the number of respondents listed within a table will not match totals for all fields or all groups, either because some areas not applicable to science and engineering have been omitted, or because only selected variables have been included in the table.

Generally, only the most current salary information is included from each data source. However, some trend data, usually limited to the survey immediately preceeding the current survey, is included for comparison. Long trend salary information may be examined by referring to earlier editions of this publication, which has been published biennially since 1964. Copies of some of the first ten editions of **SALARIES OF SCIENTISTS, ENGINEERS AND TECHNICIANS - A SUMMARY OF SALARY SURVEYS** are available from the **Scientific Manpower Commission.**

The source of the data is given at the top of each table. Full bibliographic references for each data source begin on page 179. A cross-index beginning on page 183 and a detailed Table of Contents provide rapid access to specific salary information.

This report was prepared by Eleanor Babco, Associate Director of the Scientific Manpower commission. Special thanks are extended to Sally Yochelson and Tim Babco, as well as to the SMC staff for their invaluable assistance.

STARTING SALARIES

• The **College Placement Council SALARY SURVEY - A STUDY OF 1982-83 BEGINNING OFFERS** reports beginning salary data based on job offers, not acceptances, made to graduating college students at all degree levels in selected curricula and graduate programs during the normal recruiting period, September 1982 to June 1983. Data are submitted on an ongoing basis by 185 placement offices at 160 colleges and universities throughout the United States. Offers are reported from employing organizations in business, industry, government and nonprofit and educational organizations covering a broad range of functional areas, except teaching. Formal reports are issued in January, March and July.

The final report of the 1982-83 recruiting year found the number of job offers extended to the 1983 graduating class was down sharply. The number of offers reported for bachelor's degree candidates was down 34.5% from 51,290 to 33,604. Offers to engineering graduates continued the downhill trend for a second straight year. In 1983, their proportion of the total volume dropped to 50% - the lowest level since 1976. Although petroleum engineering graduates managed to hold onto the top salary spot at $2,568 per month, the number of offers dropped dramatically. While chemical engineering graduates ranked second in salary offers at $2,228 per month, the figure was actually 1.2% below the July 1982 average offer. Overall, average salaries to engineering graduates from 1981-82 to 1982-83 showed a number of decreases ranging from a drop of 7.3% to geological engineering graduates to a decline of .1% to mechanical engineering graduates. Electrical engineering graduates showed the highest average increase (3.1%) to $2,128 per month. In the sciences, computer science continued to dominate not only in number of offers, but also in salary offers with an average offer of $1,941 per month. Humanities was the only curriculum at the bachelor's level to report more offers in 1983 than in 1982. Although at the lower end of the salary scale, humanities also recorded the largest percentage increase - 7.6% - to an average salary offer of $1,380. All disciplines in both the humanities and business groups experienced increases over July 1982 (Table 1).

A comparison of salary offers to men and women reveals no significant differences in the engineering group. Women fared slightly better in some engineering disciplines, while men received higher average offers in others. However, in all other disciplines except economics, women continued to receive lower salary offers than men (Table 2).

By functional area, the bulk of the offers to both men and women were for engineering jobs. The engineering dollar offer was also the highest - $2,113 for men and $2,128 for women. Next highest average dollar offers were made to graduates working in EDP programming systems - $1,968 for men and $1,907 for women (Table 3).

At the master's level, the employment situation seemed to improve appreciably at the end of the recruiting year. Several disciplines recorded more offers in 1982-83 than in 1981-82 and almost all reported increases in starting salaries. Inexperienced MBA's did particularly well with those having a technical undergraduate degree reporting the highest average salary offer, $2,524 per month, up 9.1% since July 1982 (Table 4).

At the doctoral level, average top dollar offers went to electrical and computer engineering graduates - $3,200 per month, up 3.3% from July 1982, while the lowest offers were made to doctorates in mathematics - $2,585 per month (Table 5).

• The general upward trend in starting salaries of inexperienced college graduates continues, according to the annual **1982 College Recruiting Report** by **Abbott, Langer & Associates.** Graduates of junior/community colleges with engineering-related degrees averaged 71% of the starting salaries of comparable bachelor's graduates. Those graduates from junior/community colleges receiving degrees in engineering technology recorded the highest average salary, $1,471 per month, while those in accounting received the lowest average salary of $976 per month (Table 6).

New baccalaureate graduates in engineering averaged $2,105 per month, up 9.0% over 1981. By subdiscipline, chemical engineers at $2,178 per month got the highest averages while civil engineers at $1,876 received the lowest. In the physical, biological, earth and mathematical sciences, bachelor's graduates in physics reported the highest averages - $1,988 per month. At the low end of the salary scale were baccalaureate graduates in education at $1,192 per month and those in marketing at $1,252 per month (Table 7).

Master's graduates in engineering averaged $2,292 per month, up 11.3%, with chemical engineering master's again reporting the highest averages of $2,370 per month and civil engineers the lowest - $2,059 per month. In the sciences, computer science graduates with master's degrees recorded the highest starting salaries - $2,212 per month - while those in the biological sciences reported the lowest - $1,837 per month (Table 8). MBA's with engineering undergraduate degrees averaged $2,495 per month while those with non-technical undergraduate degrees averaged only $2,177 per month (Table 9).

Engineering doctoral graduates averaged $2,836 per month, up 9.2%; technical Ph.D. graduates $2,730, up 9.3%; and non-technical Ph.D. graduates $2,254, up 12.5%. Doctoral graduates in electrical engineering reported the highest average salary of $2,936 per month (Table 10).

The employers paying highest salaries for bachelor's graduates were petroleum/natural gas firms, while those paying the lowest were apparel and textile manufacturing firms. Starting salaries for baccalaureate graduates by discipline and type of industry are shown in Tables 11 and 12.

• The **NORTHWESTERN ENDICOTT REPORT 1983** is the 37th annual survey of trends in the employment of college and university graduates in business and industry. Data from 251 well-known business and industrial concerns in 29 states and Washington, D.C., representing all major regions of the nation, indicate that hiring is down in 1983 and salaries have increased very little. Average starting salaries to engineering baccalaureate graduates rose only 2.7% to $2,150 per month and to master's graduates 3.7% to $2,425. Liberal arts graduates continue to receive the lowest starting salaries - $1,413 per month (Table 13). Table 14 presents average starting salaries for doctoral recipients by discipline in 1983 as reported in **A Midyear Review of the Northwestern Endicott Report - 1983.**

• Starting salaries for inexperienced BS chemists remained at their 1981 level, ending more than a decade of year-to-year increases, but increased for new master's and doctoral degree chemists as well as for new chemical engineers at all three degree levels, according to the **American Chemical Society's STARTING SALARIES 1982** (Chart 1). Although women received higher median starting salaries at the bachelor's level than men in 1981, that gain was completely gone in 1982. Median monthly starting salaries for men and women bachelor's degree chemists from 1961 to 1982 are shown in Table 15.

Where a chemist or chemical engineer works has an effect on starting salary. Regardless of degree level or sex, chemists and chemical engineers earn the most working in manufacturing industry and the least working in colleges and universities (Tables 16, 18 and 21). In the manufacturing industry, women M.S. chemists and women B.S. and M.S. chemical engineers had lower starting salaries than did men, but doctoral women chemists and chemical engineers reported higher starting salaries (Tables 16 and 21).

Another factor affecting starting salaries for chemists is area of specialization. The highest average starting salary for both master's and doctoral degree chemists is in analytical chemistry and the lowest in inorganic chemistry for M.S. chemists (Table 17).

The geographic region of the country had some bearing on starting salaries for chemists and chemical engineers at all degree levels. With the exception of M.S. chemical engineers, chemists and chemical engineers at all three degree levels in the West South Central area reported the highest starting salaries (Table 19). By highest degree earned, only women doctoral chemists had higher average starting salaries than men. At every other degree level, men chemists and chemical engineers had higher starting salaries than did women (Table 20).

• Monthly starting salaries in 1982 averaged $1,765 for chemists with B.S. degrees, $2,172 for those with M.S. degrees and $2,695 for chemists with Ph.D. degrees, up 6.3%, 13.9% and 10% respectively, according to the third annual salary survey by **INDUSTRIAL CHEMICAL NEWS** (Table 22).

• Although the combined starting salary for men and women bachelor's degree physics graduates increased only 3% in 1982, salaries paid to women rose 12%, according to the **1981-82 SURVEY OF PHYSICS AND ASTRONOMY BACHELOR'S DEGREE RECIPIENTS** by the **American Institute of Physics.** However, the explanation for this higher increase to women can be found both in the higher proportion of men who join the military, and in examination of industrial vs civilian government salaries. In industrial (manufacturing) employment, men and women reported the same median starting salaries; and civilian government positions generally paid higher starting salaries to women (Table 23).

Industry also paid higher median starting salaries to graduate physicists, according to the **AIP 1981-82 GRADUATE STUDENT SURVEY** (Table 24).

• The 1982 annual **SALARY SURVEY FOR NEW RECIPIENTS OF DOCTORATES** by the **American Mathematical Society** found that business and industry continued to pay the highest starting salaries and academic institutions the lowest to doctorates in mathematics (Table 26). Regardless of type of employer or type of activity, women received lower starting salaries than men (Table 25).

• The **PREVAILING FINANCIAL AND DATA PROCESSING STARTING SALARIES** survey has been conducted by the **Robert Half** organization since 1950. The 1983 survey finds that generally salaries paid to data processing personnel are higher in large companies than in medium ones. By position, data base administrators in large companies (9.2%) and systems programmers (8.8%) reported the highest percentage increase from 1982 to 1983 (Table 27). Average starting salary ranges for data processing personnel in small companies are reported in Table 28.

• The fifteenth annual **NATIONAL SURVEY OF COMPENSATION PAID SCIENTISTS AND ENGINEERS ENGAGED IN RESEARCH AND DEVELOPMENT**

ACTIVITIES, conducted by the **Battelle Columbus Laboratories** for the **U.S. Department of Energy**, finds that engineers continued to lead all other disciplines in highest starting salaries regardless of degree level in 1982 (Table 29). Those engineers working in chemical engineering continue to receive the highest starting salaries ($2,141 per month), while those working in materials engineering receive the lowest ($1,850 per month) (Table 30).

• Bachelor's degree engineers who received their degree in petroleum engineering received not only the highest starting salary in 1982 of all bachelor's degree engineers, but higher than any other master's degree fields - $2,578 per month - according to **THE PLACEMENT OF ENGINEERING AND TECHNOLOGY GRADUATES 1982**, conducted by the **Engineering Manpower Commission.** Lowest average salaries were reported by bachelor's degree engineers who majored in architectural engineering - $1,783 per month (Table 31).

Starting salaries of bachelor's degree and associate degree technology graduates are also reported by the **Engineering Manpower Commission** in this survey. Among all bachelor of technology graduates in 1982, those majoring in chemical engineering technology reported the highest average starting salary - $2,031 - while those majoring in drafting and design technology received the lowest - $1,545. However, at the associate degree level, those graduates majoring in air conditioning technology received the highest starting salaries - $1,467 per month, while those majoring in architectural technology received the lowest - $1,014 per month (Table 32). Trends in starting salaries to engineering and technology graduates by degree level from 1966 to 1982 are shown in Chart 2.

• The **U. S. Department of Labor's OCCUPATIONAL OUTLOOK HANDBOOK** includes information on starting salaries as well as estimating the number of people employed in various fields. Salary and employment information in selected scientific and engineering fields is summarized for 1981 in Table 33.

• Starting salary offers to graduates of two-year colleges are collected by the **Middle Atlantic Career Counseling Association.** In the 1981-82 academic year, graduates in science and engineering technologies led the salary offers to two-year graduates. At the bottom of the salary list were graduates in commercial art ($8,060) and child care ($8,216) (Table 34).

SOURCE: The College Placement Council, CPC Salary Survey - A Study of 1982-83 Beginning Offers Formal Report, No. 3, July 1983.

TABLE 1

NUMBER AND AVERAGE STARTING MONTHLY SALARY OFFERS TO INEXPERIENCED BACHELOR'S DEGREE CANDIDATES BY CURRICULUM, JULY 1982 AND JULY 1983

CURRICULUM	No. Offers	Average $ Offers		Percent Change in $ Offers July 1982
		July 1983	July 1982	
BUSINESS				
Accounting	5,618	$1,565	$1,545	1.3%
Business - General (includes Management)	3,272	1,486	1,477	0.6
Marketing & Distribution	1,457	1,411	1,370	3.0
ENGINEERING				
Aeronautical	439	2,004	1,973	1.6
Chemical	1,156	2,228	2,256	-1.2
Civil	892	1,869	1,925	-2.9
Electrical (including Computer Engineering)	8,285	2,128	2,064	3.1
Geological	35	2,089	2,253	-7.3
Industrial	841	2,048	2,023	1.2
Mechanical	3,883	2,096	2,098	-0.1
Metallurgical (includes Metallurgy & Engineering Ceramics)	277	2,146	2,106	1.9
Mining	30	2,041	2,114	-3.5
Nuclear (includes Engineering Physics)	114	2,078	2,039	1.9
Petroleum	307	2,568	2,539	1.1
Technology	624	2,006	1,958	2.5
HUMANITIES & SOCIAL SCIENCES				
Humanities	715	1,380	1,283	7.6
Economics*	577	1,590	1,543	3.1
Other Social Sciences	810	1,320	1,286	2.6
SCIENCES				
Agricultural	297	1,375	1,391	-1.2
Biological	149	1,419	1,375	3.2
Chemistry	147	1,712	1,751	-2.2
Computer Science	2,572	1,941	1,908	1.7
Health (Medical) Professions	423	1,584	1,492	6.2
Mathematics	517	1,799	1,777	1.2
Other Physical & Earth Sciences	167	1,746	1,980	-11.8

* Includes economics programs with both business and social science orientation.

SOURCE: The College Placement Council, CPC Salary Survey - A Study of 1982-83 Beginning Offers Formal Report, No. 3, July 1983.

TABLE 2

NUMBER AND AVERAGE STARTING MONTHLY SALARY OFFERS TO BACHELOR'S DEGREE CANDIDATES BY CURRICULUM AND SEX, July 1982 and July 1983

CURRICULUM	No. Offers July 1982		Average $ Offers July 1982		No. Offers July 1983		Average $ Offers July 1983	
	Men	Women	Men	Women	Men	Women	Men	Women
BUSINESS								
Accounting	5,009	3,212	$1,543	$1,547	3,339	2,279	$1,567	$1,561
Business - General (incl. Mgmt.)	2,745	1,430	1,496	1,440	2,043	1,229	1,495	1,472
Marketing and Distribution	1,001	742	1,412	1,314	895	562	1,446	1,355
ENGINEERING								
Aeronautical	487	66	1,973	1,972	380	59	2,008	1,981
Chemical	2,969	1,017	2,253	2,263	779	377	2,222	2,238
Civil [1]	1,983	343	1,924	1,930	700	192	1,865	1,881
Electrical [2]	8,945	1,031	2,062	2,079	7,239	1,046	2,128	2,132
Geological	259	52	2,254	2,250	28	7	2,049	2,250
Industrial	1,164	480	2,023	2,024	532	309	2,031	2,078
Mechanical	6,603	735	2,096	2,113	3,372	511	2,095	2,105
Metallurgical [3]	417	102	2,100	2,129	199	78	2,148	2,142
Mining	151	5	2,113	2,139	30		2,041	
Nuclear (incl. Engineering Physics)	209	35	2,028	2,102	98	16	2,074	2,106
Petroleum	965	125	2,542	2,518	245	62	2,569	2,565
Technology	1,041	64	1,962	1,884	595	29	2,007	1,981
HUMANITIES AND SOCIAL SCIENCES								
Humanities	273	378	1,362	1,227	288	427	1,457	1,328
Economics [4]	389	229	1,579	1,482	369	208	1,588	1,593
Other Social Sciences	416	483	1,375	1,209	360	450	1,427	1,234
SCIENCES								
Agricultural	385	84	1,422	1,249	247	50	1,390	1,298
Biological	87	82	1,415	1,332	61	88	1,492	1,369
Chemistry	163	99	1,747	1,757	77	70	1,741	1,681
Computer	2,017	1,210	1,907	1,909	1,578	994	1,960	1,911
Health (Medical) Professions	64	375	1,722	1,453	57	366	1,733	1,560
Mathematics	377	331	1,794	1,757	259	258	1,824	1,774
Other Physical & Earth Sciences	372	89	2,006	1,871	120	47	1,802	1,603

[1] Includes Construction, Sanitary & Transportation Engineering.
[2] Includes Computer Engineering.
[3] Includes Metallurgy and Ceramic Engineering.
[4] Includes Economics programs with both Business and Social Science Orientation.

Note: Blanks indicate no offers reported.

SOURCE: The College Placement Council, CPC Salary Survey - A Study of 1982-83 Beginning Offers Formal Report, No. 3, July 1983.

TABLE 3

NATIONAL AVERAGE MONTHLY SALARY OFFERS TO BACHELOR'S DEGREE CANDIDATES BY FUNCTIONAL AREA AND SEX, JULY 1982 AND JULY 1983

FUNCTIONAL AREA	No. Offers July 1982		Average $ Offers July 1982		No. Offers July 1983		Average $ Offers July 1983	
	Men	Women	Men	Women	Men	Women	Men	Women
Accounting/Auditing	5,075	3,261	$1,546	$1,546	3,443	2,352	$1,570	$1,558
Business Administration	1,412	872	1,504	1,412	1,064	728	1,503	1,405
Communications	127	132	1,515	1,257	121	111	1,600	1,386
Community & Service Organizations Work	122	131	1,266	1,049	70	112	1,285	1,106
EDP-Programming/ Systems	2,230	1,350	1,896	1,881	1,821	1,220	1,968	1,907
Engineering	23,572	3,762	2,101	2,129	13,162	2,486	2,113	2,128
Farm & Natural Resources Mgmt.	138	30	1,406	1,336	87	19	1,329	1,309
Finance & Economics	880	470	1,565	1,511	763	426	1,547	1,593
Health (Medical) Serv.	107	436	1,548	1,414	75	419	1,679	1,503
Manufacturing and/or Industrial Operations	911	216	1,897	1,828	482	125	1,953	1,809
Mathematics/Statistics	315	228	1,756	1,722	158	129	1,752	1,711
Merchandising/Sales Promotion	763	669	1,339	1,206	675	576	1,369	1,258
Personnel/Employee Relations	110	115	1,492	1,316	79	77	1,448	1,301
Research - Non-Scientific	106	64	1,749	1,343	143	98	1,688	1,592
Research - Scientific	696	272	1,957	1,842	341	164	1,862	1,685
Rotational Training - Non-Technical	375	239	1,355	1,286	274	220	1,442	1,340
Rotational Training - Technical	478	117	2,012	1,953	214	60	1,936	1,770
Sales - Non-Technical Degree	862	383	1,450	1,398	789	353	1,492	1,402
Sales - Technical/ Scientific Degree	212	52	1,917	1,939	138	39	1,866	1,931

SOURCE: The College Placement Council, CPC Salary Survey - A Study of 1982-83 Beginning Offers, Formal Report, No. 3, July 1983.

TABLE 4

NUMBER AND AVERAGE MONTHLY STARTING SALARY OFFERS TO INEXPERIENCED MASTER'S DEGREE CANDIDATES BY CURRICULUM, July 1982 and July 1983

CURRICULUM	Number Offers July 1983	Average $ Offers		Percent Change in $ Offers from July 1982
		July 1983	July 1982	
ENGINEERING				
Chemical	100	$2,404	$2,459	-2.2%
Civil (including Construction, Sanitary & Transportation Engineering	125	2,260	2,249	0.5
Electrical (including Computer Engineering)	836	2,461	2,369	3.9
Industrial	72	2,291	2,295	-0.2
Mechanical	408	2,400	2,332	2.9
Nuclear (including Engineering Physics)	38	2,386	2,300	3.7
SCIENCES				
Geology & Related Geological Sciences	81	2,472	2,422	2.1
Chemistry	18	2,203	1,987	10.9
Computer Science	233	2,359	2,267	4.1
Mathematics	56	2,124	2,162	-1.8
Metallurgy (including Metallurgical Engineering, Materials Engineering & Science, and Ceramics)	33	2,417	2,320	4.2
BUSINESS				
Accounting	390	1,891	1,847	2.4
MBA - Non-Technical Undergraduate				
Less Than 1 Year	1,518	2,215	2,135	3.8
Over 1 to 2 Years*	661	2,484	2,348	5.8
Over 2 to 4 Years*	756	2,632	2,503	5.2
Over 4 Years*	442	2,672	2,443	9.4
MBA - Technical Undergraduate				
Less Than 1 Year	527	2,524	2,314	9.1
Over 1 to 2 Years*	305	2,722	2,462	10.6
Over 2 to 4 Years*	330	2,780	2,596	7.1
Over 4 Years*	122	2,800	2,635	6.3
MS - Business (including Management, Marketing, Finance, etc.)	125	2,122	2,099	1.1
Industrial Management (including Administration)	63	2,196	1,988	10.5
Administration (including Public, Hospital, etc.)	52	1,868	1,726	8.2
HUMANITIES AND SOCIAL SCIENCES				
Humanities	34	1,617	1,512	6.9
Social Sciences	90	1,606	1,552	3.5

* Years of previous full-time, non-military employment.

SOURCE: The College Placement Council, CPC Salary Survey - A Study of 1982-83 Beginning Offers, Formal Report, No. 3, July 1983.

TABLE 5

NUMBER AND AVERAGE MONTHLY STARTING SALARY OFFERS TO DOCTORAL DEGREE CANDIDATES BY CURRICULUM, July 1982 and July 1983

CURRICULUM	Number Offers July 1983	Average $ Offers		Percent Change in $ Offers from July 1982
		July 1983	July 1982	
ENGINEERING				
Chemical	81	$3,130	$3,019	3.7%
Civil (including Construction, Sanitary & Transportation)	13	2,936	2,851	3.0
Electrical (including Computer)	123	3,200	3,099	3.3
Mechanical	34	3,150	2,959	6.5
SCIENCES				
Chemistry	214	2,694	2,719	-0.9
Mathematics (including Operations, Research, Statistics & Actuarial Science)	19	2,585	2,544	1.6
Metallurgy (including Metallurgical Engineering, Materials Engineering, & Science & Ceramics)	20	3,072	2,968	3.5
Physics	68	2,903	2,785	4.2

SOURCE: Abbott, Langer & Associates, College Recruiting Report, 1982.

TABLE 6

NUMBER AND MONTHLY STARTING SALARIES OF INEXPERIENCED COLLEGE GRADUATES WITH JUNIOR/COMMUNITY COLLEGE DEGREES BY DISCIPLINE, 1982

DISCIPLINE	Number	Mean	Median
All Engineering	289	$1,435	$1,377
Engineering Technology	84	1,471	1,526
Electronics Technology	182	1,430	1,313
Mechanical Technology	23	1,349	1,374
Biological Sciences	8	1,203	1,180
Chemistry	8	1,305	1,344
Computer Programming	140	1,299	1,345
Data Processing	25	1,153	1,141
Drafting	57	1,140	1,150
Accounting	9	976	1,080
Agriculture	7	1,000	1,000
Business Administration	64	1,013	975
All Technical-Related	241	1,246	1,248
All Non-Technical-Related	80	1,008	978

SOURCE: Abbott, Langer & Associates, College Recruiting Report, 1982.

TABLE 7

NUMBER AND MONTHLY STARTING SALARIES OF INEXPERIENCED COLLEGE GRADUATES WITH BACHELOR'S DEGREES BY DISCIPLINE, 1982

DISCIPLINE	Number	Mean	Median
All Engineering	3,451	$2,015	$2,025
Aeronautical Engineering	14	2,011	1,969
Agricultural Engineering	5	1,886	1,900
Chemical Engineering	313	2,178	2,208
Civil Engineering	465	1,876	1,850
Electrical Engineering	1,231	2,022	2,025
Industrial Engineering	180	1,960	1,986
Mechanical Engineering	948	2,039	2,050
Metallurgical Engineering	34	2,055	2,075
Mining/Mineral Engineering	13	2,033	1,950
Nuclear Engineering	17	2,087	2,084
Science	12	2,013	2,034
Biological Sciences	34	1,595	1,733
Chemistry	94	1,494	1,550
Computer Science	966	1,768	1,831
Geology	6	1,951	2,102
Mathematics-Statistics	146	1,686	1,724
Physics	38	1,988	2,000
Accounting	670	1,492	1,537
Agriculture	103	1,313	1,250
Business, Economics & Finance	2,286	1,266	1,208
Education	36	1,192	1,167
Industrial Management	68	1,456	1,417
Liberal Arts	292	1,306	1,275
Marketing	540	1,252	1,208
All Technical (Non-Engineering)	1,603	1,794	1,818
All Non-Technical	4,530	1,311	1,250

SOURCE: Abbott, Langer & Associates, College Recruiting Report, 1982.

TABLE 8

NUMBER AND MONTHLY STARTING SALARIES OF INEXPERIENCED COLLEGE GRADUATES WITH MASTER'S DEGREES (EXCLUDING MBA) BY DISCIPLINE, 1982

DISCIPLINE	Number	Mean	Median
All Engineering	178	$2,292	$2,333
Chemical Engineering	35	2,370	2,376
Civil Engineering	13	2,059	1,978
Electrical Engineering	75	2,323	2,365
Industrial Engineering	7	2,198	2,250
Mechanical Engineering	25	2,296	2,301
Biological Sciences	17	1,837	1,833
Chemistry	6	2,014	1,984
Computer Science	54	2,212	2,250
Mathematics-Statistics	14	1,895	1,829
Physics	10	2,164	2,229
Accounting	10	1,837	1,800
Business, Economics & Finance	26	1,882	1,875
Industrial Management	8	1,965	2,135
Law	17	1,770	1,800
Liberal Arts	18	1,582	1,516
All Technical (Non-Engineering)	116	2,063	2,177
All Non-Technical	120	1,750	1,800

SOURCE: Abbott, Langer & Associates, College Recruiting Report, 1982.

TABLE 9

NUMBER AND MONTHLY STARTING SALARIES OF INEXPERIENCED COLLEGE GRADUATES WITH MBA DEGREES AND UNDERGRADUATE DEGREES BY DISCIPLINE, 1982

DISCIPLINE	Number	Mean	Median
All Engineering	10	$2,495	$2,550
Chemical Engineering	5	2,547	2,600
Computer Science	7	2,332	2,500
Accounting	26	1,836	1,800
Business, Economics & Finance	404	2,118	2,333
Industrial Management	6	2,335	2,230
Liberal Arts	12	2,073	2,380
Marketing	136	2,415	2,450
All Technical (Non-Engineering)	15	2,402	2,500
All Non-Technical	602	2,177	2,333

TABLE 10

NUMBER AND MONTHLY STARTING SALARIES OF INEXPERIENCED COLLEGE GRADUATES WITH DOCTORAL DEGREES BY DISCIPLINE, 1982

DISCIPLINE	Number	Mean	Median
All Engineering	25	$2,836	$2,900
Chemical Engineering	7	2,785	2,823
Electrical Engineering	7	2,936	2,900
Chemistry	21	2,829	3,048
Mathematics-Statistics	6	2,747	2,767
Physics	12	2,795	2,938
Business, Economics & Finance	9	2,147	2,100
All Technical (Non-Engineering)	56	2,730	2,767
All Non-Technical	17	2,254	2,100

SOURCE: Abbott, Langer & Associates, College Recruiting Report, 1982.

TABLE 11

MEDIAN MONTHLY STARTING SALARIES OF INEXPERIENCED BACHELOR'S GRADUATES (NON-ENGINEERING) BY TYPE OF INDUSTRY AND DISCIPLINE, 1982

TYPE OF INDUSTRY	DISCIPLINE										
	Biological Sciences	Chemistry	Computer Science	Math./Stats.	Accounting	Agriculture	Bus., Econ. & Finance	Liberal Arts	Marketing	All Technical (Non-Eng'r.)	All Non-Technical
TOTAL	$1,733	$1,550	$1,831	$1,724	$1,537	$1,250	$1,208	$1,275	$1,208	$1,818	$1,250
All Manufacturing/Extractive Firms	1,733	1,709	1,894	1,800	1,583	1,550	1,520	1,328	1,500	1,894	1,520
All Non-Manufacturing Firms	1,375	1,200	1,622	1,583	1,530	1,208	1,133	1,250	1,175	1,675	1,250
Apparel & Textile Product Manufacturers								1,166			1,417
Banking & Other Financial Firms			1,443	1,500	1,354	1,308	1,292	1,333	1,100	1,443	1,292
Chemical/Pharmaceutical/Plastic/ Rubber Product Manufaeturers	1,733	1,709	2,040		1,623		1,600	1,275	1,390	1,733	1,600
Communications Services			1,708		1,525		1,525	1,250		1,583	1,525
Computer Services			1,800	1,733	1,700		1,600		1,600	1,800	1,600
Construction & Engineering Firms			1,464		1,281					1,464	1,281
Electrical/Aerospace/Aircraft/ Electronics Product Manufacturers	1,751	1,912	1,910	1,880	1,500		1,474		1,500	1,894	1,500
Fabricated Metal Product Manufacturers			1,975						1,517	1,785	1,542
Food/Beverage/Tobacco Product Manufacturers			1,667		1,550	1,375	1,400	1,333	1,715	1,450	1,458
Glass & Glass Product Manufacturers					1,708						1,583
Hospitality Firms (food, lodging & recreation)					1,458		1,275				1,275
Insurance Firms			1,490	1,583	1,400		1,397	1,350	1,385	1,522	1,350
Machinery & Heavy Equipment Manufacturers			1,520							1,847	1,408
Merchandising Firms (retail & wholesale)			1,750		1,188	1,167	1,133	1,167	1,175	2,400	1,133
Paper Product Manufacturers/Printers/Publishers			1,583		1,502		1,514	1,158	1,500	1,824	1,502
Petroleum/Natural Gas Firms - Extracting/Refining		2,043	1,826		1,684		1,653			1,826	1,684
Research Organizations	933	1,150	2,000	1,827			1,192			1,833	1,383
Transportation Services			2,150		1,475		1,450		1,500	1,650	1,500
Utilities			1,798	1,784	1,600		1,527	1,410		1,795	1,599

NOTE: Blanks indicate fewer than 5 cases reported.

SOURCE: Abbott, Langer & Associates, College Recruiting Report, 1982.

TABLE 12

MEDIAN MONTHLY STARTING SALARIES OF INEXPERIENCED BACHELOR'S GRADUATES IN ENGINEERING BY TYPE OF INDUSTRY AND SUB-DISCIPLINE, 1982

TYPE OF INDUSTRY	SUBDISCIPLINE IN ENGINEERING								
	All	Chemical	Civil	Electrical	Industrial	Mechanical	Metal-lurgical	Mining/ Mineral	Nuclear
TOTAL	$2,025	$2,208	$1,850	$2,025	$1,986	$2,050	$2,075	$1,950	$2,084
All Manufacturing/Extractive Firms	2,050	2,208	2,050	2,025	1,971	2,050	2,075	1,950	2,000
All Non-Manufacturing Firms	1,968	2,183	1,850	2,018	2,042	2,018	1,960	2,178	2,102
Apparel & Textile Product Manufacturers	1,604				1,604				
Chemical/Pharmaceutical/Plastic/Rubber Product Manufacturers	2,203	2,250		2,125	2,058	2,153			
Communications Services	1,833			1,972					
Construction & Engineering Firms	1,842	1,983	1,830	2,008		1,853			
Electrical/Aerospace/Aircraft/ Electronics Product Manufacturers	2,029	2,067	1,670	2,025	1,971	2,060	2,028		
Fabricated Metal Product Manufacturers	2,042		2,050	1,925		2,042		1,950	
Food/Beverage/Tobacco Product Manufacturers	2,083	2,083			2,000				
Glass & Glass Product Manufacturers	1,958	2,117		2,117		1,958			
Machinery & Heavy Equipment Manufacturers	2,050	2,175	2,046	2,025	1,900	2,050	2,075		2,000
Paper Product Manufacturers/Printers/Publishers	2,181	2,234	2,066	2,165	2,010	2,219			
Petroleum/Natural Gas Firms - extracting/refining	2,300	2,388	2,271	2,325		2,305			
Research Organizations	1,988			2,000		1,976			
Transportation Services	2,117	2,270	1,915	2,058		2,117			
Utilities	2,018	2,000	2,018	2,018	2,102	2,018		2,178	2,102

NOTE: Blanks indicate fewer than 5 cases reported.

SOURCE: The Endicott Report, 1983, Thirty-seventh Annual Report, by Victor R. Lindquist.

TABLE 13

NUMBER AND AVERAGE STARTING SALARIES FOR NEW GRADUATES BY FIELD AND DEGREE, 1982 AND 1983

FIELD	BACHELOR'S DEGREE				MASTER'S DEGREE			
	Number to be hired in 1983	1982	1983	Percent Increase	Number to be hired in 1983	1982	1983	Percent Increase
Engineering (145)	8,453	$2,094	$2,150	2.7%	949	$2,339	$2,425	3.7%
Accounting (113)	7,620	1,573	1,623	3.2	702	1,941	2,014	3.8
Sales-Marketing (78)	1,574	1,506	1,554	3.2				
Business Administration (75)	2,403	1,495	1,547	3.5				
Liberal Arts (34)	434	1,413	1,522	7.7				
Chemistry (38)	357	1,796	1,862	3.7				
Math or Statistics (39)	370	1,741	1,808	3.8				
Economics or Finance (41)	406	1,547	1,645	6.3				
Computer Science (107)	3,165	1,839	1,934	5.2				
Other Fields (44)	731	1,705	1,763	3.4				
MBA with Technical BS					794	2,051	2,147	4.7
MBA with Non-Technical BA					1,243	2,119	2,223	4.9
Other Technical Fields					752	2,185	2,207	1.0
Other Non-Technical Fields					155	2,033	2,144	5.5

NOTE: Number of hiring companies in parenthesis.

SOURCE: A Midyear Review of the Northwestern Endicott Report - 1983, by Victor R. Lindquist.

TABLE 14

AVERAGE STARTING SALARIES OF DOCTORAL RECIPIENTS IN BUSINESS AND INDUSTRY, 1983

DISCIPLINE-FIELD	AVERAGE STARTING SALARY
Aeronautical Engineering	$39,000
Biology	33,700
Chemistry	34,700
Chemical Engineering	38,500
Civil Engineering	32,204
Computer Science	38,255
Electrical Engineering	39,036
Engineering Science	31,000
Geology	35,900
Geophysics	37,352
Law	30,200
Materials/Metallurgy	36,490
Mathematics	33,150
Mechanical Engineering	38,200
Medical	70,000
Nuclear Engineering	37,860
Oceanography	29,000
Ocean Engineering	38,500
Operations/Systems	36,320
Pharmacology	35,000
Psychology	31,000
Physics	34,900
Statistics	30,000

NOTE: Salaries listed are averages of data compiled from offers extended and accepted and offers of employment extended but not yet accepted.

SOURCE: CHEMICAL AND ENGINEERING NEWS, American Chemical Society, November 5, 1962; October 28, 1963; November 9, 1964; October 18, 1965; October 23, 1967; 1979 Survey Report, Starting Salaries and Employment Status of Chemistry and Chemical Engineering Graduates; & Starting Salaries 1980, 1981 and 1982.

TABLE 15

MEDIAN MONTHLY STARTING SALARIES FOR MEN AND WOMEN CHEMISTS*, BACHELOR'S LEVEL, 1961-1982

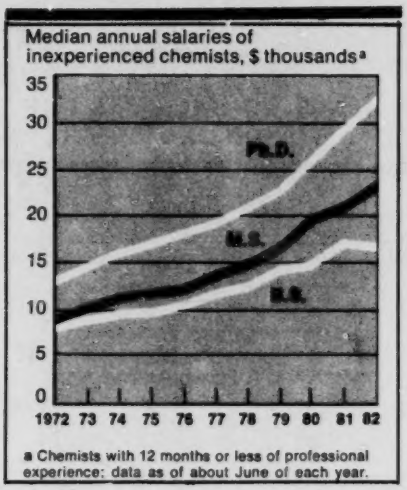
YEAR	MEN	WOMEN	% BELOW MEN
1961	$500	$433	13.4
1962	525	450	14.3
1963	550	473	14.0
1964	560	480	14.3
1965	590	499	15.4
1966	625	550	12.0
1967	660	600	10.0
1968	712	625	12.2
1969	750	702	6.4
1970	758	644	15.0
1971	691	650	5.9
1972	708	650	8.2
1973	750	708	5.6
1974	816	833	+2.1
1975	833	801	3.8
1976	900	908	+0.9
1977	1,000	1,000	0.0
1978	1,042	1,083	+3.9
1979	1,200	1,233	+2.8
1980	1,250	1,250	0.0
1981	1,417	1,541	+8.8
1982	1,417	1,417	0.0

*Includes only members of the American Chemical Society.

SOURCE: Chemical and Engineering News, October 18, 1982.

CHART 1

TRENDS IN ANNUAL MEDIAN STARTING SALARIES OF INEXPERIENCED CHEMISTS BY DEGREE LEVEL, 1972-82



SOURCE: American Chemical Society, Starting Salaries 1982, November 1982.

TABLE 16

NUMBER AND MEAN STARTING SALARIES OF CHEMISTS* BY HIGHEST DEGREE EARNED, TYPE OF EMPLOYER AND SEX, 1982

TYPE OF EMPLOYER	M E N			W O M E N		
	B. S.	M. S.	Ph.D.	B. S.	M. S.	Ph.D.
Manufacturing Industry	(105) $18,822	(30) $24,438	(135) $32,478	(94) $18,905	(12) $23,912	(19) $33,671
Non-Manufacturing Industry	(8) 16,063	(1) 26,300	(3) 30,697	(6) 16,300	(0)	(1) 39,000
College or University	(23) 12,004	(3) 17,807	(22) 19,787	(10) 12,820	(2) 11,850	(4) 20,088
High School						
Government	(8) 19,385	(3) 24,055	(6) 28,789	(6) 14,212	(1) 19,500	(2) 27,700
Hospital/Lab, Non-Profit						
Other	(29) 15,170	(3) 15,333	(5) 32,641	(31) 13,901	(2) 16,917	(0)

NOTE: Blanks indicate no data reported.

* Includes only members of the American Chemical Society.

SOURCE: American Chemical Society, Starting Salaries 1982, November 1982.

TABLE 17

NUMBER AND MEAN ANNUAL STARTING SALARIES OF GRADUATE CHEMISTS* BY FIELD OF HIGHEST DEGREE, 1982

FIELD OF HIGHEST DEGREE	M. S.		Ph.D.	
	No.	Mean	No.	Mean
Analytical	23	$19,471	40	$30,367
Inorganic	10	13,496	53	26,301
Organic	28	18,226	102	26,243
Physical	14	17,331	73	25,881
Biochemistry	0		0	
Chemistry, General	15	19,361	2	24,000
Chemistry, Other	1	26,000	11	22,863
All Fields	94	18,373	297	26,436

* Includes only members of the American Chemical Society.

NOTE: Blanks indicate insufficient data.

TABLE 18

NUMBER AND MEAN STARTING SALARIES OF CHEMISTS* AND CHEMICAL ENGINEERS* BY DEGREE LEVEL AND TYPE OF EMPLOYER, 1982

TYPE OF EMPLOYER	CHEMISTS			CHEMICAL ENGINEERS		
	B. S.	M. S.	Ph. D.	B. S.	M. S.	Ph. D.
Manufacturing Industry	(199) $18,861	(42) $24,287	(154) $32,625	(439) $26,695	(42) $29,339	(25) $35,574
Non-Manufacturing Industry	(14) 16,164	(1) 26,300	(4) 32,773	(47) 25,787	(5) 27,220	(1) 34,000
College or University	(33) 12,251	(5) 15,424	(26) 19,833	(2) 18,750	(0)	(5) 29,770
Government	(14) 17,168	(4) 22,917	(8) 28,517	(17) 19,831	(2) 23,500	(0)
Other	(60) 14,515	(5) 15,967	(5) 32,641	(18) 24,367	(2) 27,050	(0)
All Employers	(340) 17,303	(58) 22,758	(200) 30,742	(558) 26,352	(54) 28,832	(32) 34,634

NOTE: Blanks indicate no data reported.

* Includes only members of the American Chemical Society.

SOURCE: American Chemical Society, Starting Salaries 1982, November, 1982.

TABLE 19

NUMBER AND MEAN STARTING SALARIES OF CHEMISTS* AND CHEMICAL ENGINEERS* BY HIGHEST DEGREE EARNED AND GEOGRAPHIC REGION, 1982

GEOGRAPHIC REGION	CHEMISTS			CHEMICAL ENGINEERS		
	B. S.	M. S.	Ph.D.	B. S.	M. S.	Ph.D.
Pacific	(38) $17,433	(2) $25,180	(10) $29,600	(42) $27,361	(6) $30,483	(1) $34,500
Mountain	(10) 14,700	(1) 25,000	(6) 30,213	(17) 27,271	(0)	(0)
West North Central	(34) 17,751	(3) 19,667	(9) 30,562	(40) 25,892	(2) 27,300	(1) 35,450
West South Central	(25) 20,284	(6) 27,070	(27) 32,750	(112) 27,537	(12) 29,075	(8) 35,550
East North Central	(73) 17,659	(8) 23,128	(40) 30,501	(96) 26,482	(5) 28,880	(8) 33,700
East South Central	(7) 17,280	(2) 19,487	(1) 24,090	(14) 26,393	(1) 28,000	(0)
Middle Atlantic	(87) 17,305	(17) 23,188	(58) 31,147	(141) 25,751	(18) 29,294	(8) 34,750
South Atlantic	(36) 15,835	(13) 22,614	(35) 30,973	(68) 25,512	(7) 27,929	(5) 34,470
New England	(24) 16,579	(4) 22,460	(11) 29,569	(25) 24,584	(3) 25,120	(1) 34,000
All Regions Combined	(340) 17,303	(58) 22,758	(200) 30,742	(558) 26,352	(54) 28,832	(32) 34,634

NOTE: Blanks indicate no data reported.
* Includes only members of the American Chemical Society.

TABLE 20

NUMBER AND MEAN ANNUAL STARTING SALARIES OF INEXPERIENCED CHEMISTS* AND CHEMICAL ENGINEERS* BY HIGHEST DEGREE EARNED AND SEX, 1982

HIGHEST DEGREE EARNED	CHEMISTS				CHEMICAL ENGINEERS			
	Men		Women		Men		Women	
	Number	Salary	Number	Salary	Number	Salary	Number	Salary
Bachelor's	185	17,330	155	17,271	390	26,446	168	26,134
Master's	41	23,317	17	21,410	45	28,968	9	28,156
Doctorate	174	30,654	26	31,327	29	35,252	3	28,667

* Includes only members of the American Chemical Society.

SOURCE: American Chemical Society, Starting Salaries 1982, November 1982.

TABLE 21

NUMBER AND MEDIAN STARTING SALARIES OF CHEMICAL ENGINEERS* BY DEGREE, TYPE OF EMPLOYER AND SEX, 1982

TYPE OF EMPLOYER	TOTAL			MEN			WOMEN		
	B.S.	M.S.	Ph.D.	B.S.	M.S.	Ph.D.	B.S.	M.S.	Ph.D.
All Employers	$26,700	$29,000	$35,000	$27,000	$29,000	$35,000	$26,400	$28,800	$28,500
Manufacturing Industry	27,000	29,000	35,000	27,000	29,300	35,250	26,580	28,500	35,000
Non-Manufacturing Industry	26,000	27,500	34,000	26,300	26,750	34,000	25,725	30,000	
College or University	18,750		30,000	18,750		32,400			25,500
Government	19,857	23,500		20,170	23,500		19,857		
Other	26,000	27,050		26,000	27,050		26,000		
No Response	27,000	29,000	36,100	28,100	29,000	36,100	26,520		

NOTE: Blanks indicate no data reported.
*Includes only members of the American Chemical Society.

SOURCE: Industrial Chemical News, October 1982.

TABLE 22

MONTHLY AVERAGE STARTING SALARIES OF INDUSTRIAL CHEMISTS BY DEGREE LEVEL, 1981 and 1982

DEGREE LEVEL	1981	1982	% Increase
B. S.	$1,660	$1,765	6.3%
M. S.	1,906	2,172	13.9
Ph.D.	2,450	2,695	10.0

SOURCE: American Institute of Physics, 1981-82 Survey of Physics and Astronomy Bachelor's Degree Recipients, AIP Pub. R-211.14, April 1983.

TABLE 23

DISTRIBUTION AND MEDIAN MONTHLY STARTING SALARIES OF PHYSICS BACHELOR'S DEGREE RECIPIENTS BY TYPE OF EMPLOYER AND SEX, 1982

TYPE OF EMPLOYER	MEN (502 Reported Salaries)		WOMEN (98 Reported Salaries)		TOTAL (600 Reported Salaries)	
	Distribution by Employer	Median	Distribution by Employer	Median	Distribution by Employer	Median
Industry - Mfg.	36%	$2,020	45%	$2,020	38%	$2,020
Industry - Service	21	1,920	24	1,830	22	1,900
High School	3	1,060	4		3	1,050
College or University	4	1,300	3		4	1,300
Government, Civilian	5	1,375	8	2,050	5	1,400
Government, Military	27	1,360	12	1,350	24	1,360
FFRC*	2	1,800	2	1,950	2	1,850
Other	2		2		2	
Total	100	1,680	100	1,855	100	1,710

* Federally Funded Research Center. NOTE: Blanks indicate insufficient data.

SOURCE: American Institute of Physics, 1981-82 Graduate Student Survey, AIP Pub. R-207.15, May 1983.

TABLE 24

MEDIAN MONTHLY STARTING SALARIES OF GRADUATE PHYSICISTS, 1981-82

TYPE OF EMPLOYER	TERMINAL MASTER'S RECIPIENTS		DOCTORATE RECIPIENTS			
			% Accepting:		Monthly Salaries For:	
	Percentage Accepting Positions	Salary	Post-docs	Potentially Permanent Positions	Post-docs	Potentially Permanent Positions
Secondary School	2%	$ †	%	%	$ †	$ †
4-Year College	7	1,670		3	†	1,650
University	8	†	34	11	1,510	1,990
Industry	56	2,230	3	28	2,470	2,830
Government (including military)	17	1,850	2	7	1,850	2,350
FFRC*	2	†	5	4	1,870	2,400
Other	8	†	2	1	†	†
All Employers	100	2,140	100		1,550	2,670

* Federally-funded Research Center. † Fewer than 10 graduates reported salaries.

NOTE: Blanks indicate no salaries reported.

SOURCE: American Mathematical Society, NOTICES, Vol. 29, No. 7, Issue 221, November 1982.

TABLE 25

MEDIAN BEGINNING SALARIES IN MATHEMATICS FOR PH.D.'S BY TYPE OF EMPLOYER AND SEX, 1981 AND 1982

TYPE OF EMPLOYER	MEN		WOMEN	
	1981	1982	1981	1982
Teaching or Teaching & Research (9 months)	$19,000	$21,000	$19,500	$19,800
Teaching or Teaching & Research (12 months)	20,000	25,000	21,300	26,600
Research (12 months)	20,000	23,000	16,800	26,500
Business & Industry (12 months)	31,900	36,600	29,000	35,000
Government (12 months)	29,400	33,100	26,900	32,600

TABLE 26

MEDIAN BEGINNING SALARIES IN MATHEMATICS FOR NEW PH.D.'S BY TYPE OF EMPLOYER, 1978-1982

TYPE OF EMPLOYER	1978	1979	1980	1981	1982
Teaching or Teaching & Research (9 months)	$14,500	$15,700	$17,100	$19,000	$20,600
Research (9 months)		13,200	13,700		19,000
Teaching or Teaching & Research (12 months)	18,500	19,500	19,500	20,300	25,000
Research (12 months)	18,500	17,400	18,000	20,000	24,500
Business & Industry (12 months)	24,000	25,400	28,400	30,800	35,400
Government (12 months)	22,000	24,300	24,400	29,000	32,500

NOTE: Blanks indicate that not enough returns were received to warrant including the figures.

SOURCE: Robert Half of New York, Inc., Prevailing Financial & Data Processing Starting Salaries, 1983.

TABLE 27

AVERAGE STARTING SALARY RANGES OF DATA PROCESSING PERSONNEL BY POSITION AND COMPANY SIZE, 1982 AND 1983

POSITION AND COMPANY SIZE	SALARY RANGES		% Increase
	1982	1983	
SYSTEMS & PROGRAMMING			
Manager			
Large Companies	$29,500-36,000	$31,000-38,500	6.1%
Medium Companies	28,000-34,000	30,000-36,000	6.5
Project Manager			
Large Companies	29,000-36,000	30,000-38,000	4.6
Medium Companies	26,000-33,000	28,000-35,000	6.8
Project Leader			
Large Companies	27,000-35,000	29,000-36,000	4.8
Medium Companies	26,000-33,000	28,000-35,000	6.8
Systems Analyst			
Large Companies	28,000-36,000	29,500-36,000	2.3
Medium Companies	26,000-32,000	27,000-33,000	3.4
Programmer Analyst			
Large Companies	20,000-28,000	22,000-30,000	8.3
Medium Companies	20,000-28,000	21,000-29,000	4.2
Programmer			
Large Companies	17,000-22,000	18,000-24,000	7.7
Medium Companies	16,000-20,000	18,000-21,000	8.3
TECHNICAL SUPPORT			
Manager			
Large Companies	33,000-45,000	35,000-45,000	2.6
Medium Companies	30,000-38,000	32,000-40,000	5.9
Systems Programmer			
Large Companies	24,000-33,000	26,000-36,000	8.8
Medium Companies	25,000-32,000	27,000-35,000	8.8
DATA BASE SUPPORT			
Data Base Administrator			
Large Companies	26,500-33,000	29,000-36,000	9.2
Medium Companies	26,000-32,500	28,000-34,000	6.0
Data Base Specialist			
Large Companies	25,000-35,000	27,000-37,000	6.7
Medium Companies	23,000-28,000	25,000-30,000	7.8
TELECOMMUNICATIONS			
Manager			
Large Companies	28,000-33,000	30,000-35,000	6.6
Medium Companies	25,000-33,000	27,000-35,000	6.9
Telecommunications Specialist			
Large Companies	27,000-30,000	28,000-32,000	5.3
Medium Companies	19,000-28,000	21,000-30,000	8.5
OPERATIONS			
Manager			
Large Companies	25,000-34,000	27,000-36,000	6.8
Medium Companies	24,000-32,000	26,000-34,000	7.1
Shift Supervisor			
Large Companies	19,000-25,000	21,000-27,000	9.1
Medium Companies	17,000-22,000	19,000-23,000	7.7
Operator			
Large Companies	14,500-18,000	15,000-19,500	6.2
Medium Companies	13,000-17,000	14,000-18,000	6.7

SOURCE: Robert Half of New York, Inc., Prevailing Financial & Data Processing Starting Salaries, 1983.

TABLE 27 (continued)

AVERAGE STARTING SALARY RANGES OF DATA PROCESSING PERSONNEL BY POSITION AND COMPANY SIZE, 1982 AND 1983

POSITION AND COMPANY SIZE	SALARY RANGES		% Increase
	1982	1983	
Control Analyst			
Large Companies	$14,000-18,000	$15,000-19,000	6.3%
Medium Companies	13,500-17,000	14,000-18,500	6.6
EDP AUDIT			
Manager			
Large Companies	28,000-38,000	30,000-40,000	6.1
Medium Companies	26,000-32,000	28,000-35,000	8.6
Specialist			
Large Companies	23,000-32,000	25,000-34,000	7.3
Medium Companies	22,000-28,000	23,000-30,000	6.0

TABLE 28

AVERAGE STARTING SALARY RANGES OF DATA PROCESSING PERSONNEL IN SMALL COMPANIES BY POSITION, 1982 AND 1983

POSITION AND COMPANY SIZE	SALARY RANGES		% Increase
	1982	1983	
SYSTEMS & PROGRAMMING			
Manager	$24,000-33,000	$26,000-35,000	7.0
Project Manager	21,000-28,000	23,000-30,000	8.2
Project Leader	21,000-28,000	23,000-30,000	8.2
Systems Analyst	21,000-26,000	23,000-28,000	8.5
Programmer Analyst	18,200-25,000	19,000-26,000	4.7
Programmer	14,000-18,000	15,000-19,000	4.8
OPERATIONS			
Manager	20,000-27,000	22,000-29,000	8.5
Operator	12,000-16,000	13,000-17,000	7.1
Control Analyst	12,000-14,500	12,000-15,000	1.9
CONSULTING			
Manager	35,000-53,000	40,000-55,000	8.0
Senior	28,000-34,000	30,000-37,000	8.1
Associate	25,000-30,000	25,000-32,000	3.6
TECHNICAL WRITING			
Manager	30,000-40,000	32,000-42,000	5.7
Software/Hardware Writer	22,000-25,000	23,000-28,000	8.5
Documentation Specialist	17,000-25,000	18,000-27,000	7.1
METHODS ANALYSIS			
Manager	28,000-34,000	29,000-35,000	3.2
Analyst	17,000-25,000	18,000-26,000	4.8
EDP EDUCATION			
Manager	30,000-40,000	32,000-40,000	2.9
Curriculum Developer	22,000-30,000	24,000-33,000	9.6
Instructor	18,000-26,000	20,000-28,000	9.1
SOFTWARE DEVELOPMENT			
Product Manager	35,000-60,000	40,000-60,000	5.3
Software Engineer	28,000-40,000	30,000-40,000	2.9

SOURCE: Batelle, Columbus Laboratories, 1982 National Survey of Compensation Paid Scientists and Engineers Engaged in Research and Development Activities, December 1982.

TABLE 29

NUMBER AND MEAN MONTHLY STARTING SALARIES OF NONSUPERVISORY EMPLOYEES ENGAGED IN R & D ACTIVITIES BY FIELD OF DEGREE AND DEGREE LEVEL, 1982

FIELD OF DEGREE	DEGREE LEVEL					
	Bachelor's		Master's		Doctorate	
	Number	Salary	Number	Salary	Number	Salary
Engineering	1,161	$2,088	75	$2,383	13	$2,892
Chemistry	36	1,492	2	2,150	13	2,454
Physics	16	1,881	1	2,200	1	2,200
Life Sciences	13	1,638			10	2,290
Math & Statistics	54	1,911	4	2,175		
Social Sciences	3	1,733	2	2,200		

TABLE 30

NUMBER AND MEAN STARTING SALARIES OF NONSUPERVISORY ENGINEERING BACHELOR'S DEGREE EMPLOYEES ENGAGED IN R & D ACTIVITIES BY WORKING-AS-OCCUPATION, 1982

WORKING-AS-OCCUPATION	NUMBER	SALARY
Aeronautical Engineering	71	$2,018
Chemical Engineering	41	2,141
Electrical Engineering	855	2,098
Materials Engineering	2	1,850
Mechanical Engineering	53	1,991
Metallurgical Engineering	3	2,100
Nuclear Engineering	7	2,114

SOURCE: Engineering Manpower Commission, The Placement of Engineering and Technology Graduates 1982.

TABLE 31

MONTHLY STARTING SALARIES OF ENGINEERING GRADUATES BY CURRICULUM AND DEGREE LEVEL, 1982

CURRICULUM	DEGREE LEVEL		
	B.S.	M.S.	Ph.D.
Aerospace	$1,864	$2,231	$3,300
Agricultural	1,922		
Architectural	1,783		
Ceramic	2,137		
Chemical	2,215	2,332	3,006
Civil	1,914	2,183	2,645
Computer	1,968	2,367	3,190
Electrical & Electronic	2,058	2,369	2,991
Mechanical	2,097	2,302	2,885
Metallurgical	2,092	2,445	2,756
Mining & Geological	2,197	2,463	2,945
Marine	1,988	2,000	
Nuclear	2,106	2,335	2,769
Petroleum	2,578	2,655	3,208
Overall	2,077	2,335	2,941

TABLE 32

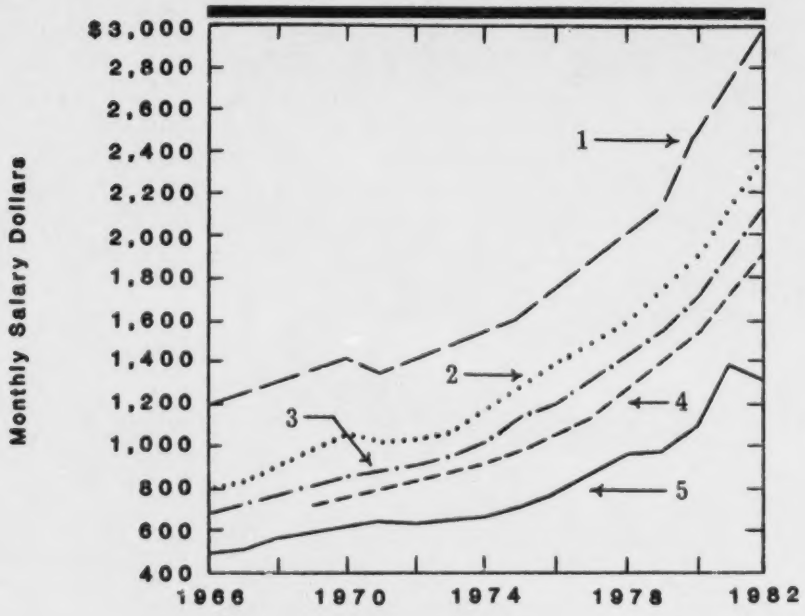
MEAN MONTHLY STARTING SALARIES OF TECHNOLOGY GRADUATES BY CURRICULUM AND LEVEL OF DEGREE, 1982

CURRICULUM	Bachelor of Technology	Associate of Technology
Air Conditioning	$1,902	$1,467
Architectural	1,554	1,014
Automotive Engineering Technology	1,697	1,109
Civil	1,685	1,119
Chemical Engineering Technology	2,031	1,333
Computer	1,836	1,225
Drafting & Design Technology	1,545	1,222
Electrical	1,956	1,362
Electronic	1,846	1,356
Industrial	1,925	1,426
Manufacturing	1,910	1,315
Mechanical	1,938	1,376
Other	1,885	1,364
TOTAL	1,876	1,300

SOURCE: Engineering Manpower Commission, "Placement Highlights, 1982: A Changing Picture," Engineering Manpower Bulletin, Number 63, November, 1982.

CHART 2

TRENDS IN STARTING SALARIES TO ENGINEERING AND TECHNOLOGY GRADUATES BY DEGREE, 1966-1982



1 - Ph.D. Engineering Graduates
2 - M.S. Engineering Graduates
3 - B.S. Engineering Graduates
4 - B.S. Technology Graduates
5 - 2-Year Technology Graduates

SOURCE: U.S. Department of Labor, Occupational Outlook Handbook, 82-83 Edition.

TABLE 33

STARTING SALARIES OF SCIENTISTS BY FIELD, TYPE OF EMPLOYER AND HIGHEST DEGREE ATTAINED, 1981

FIELD	Estimated Number Employed in 1980	TYPE OF EMPLOYER					
		1981 Private Industry			1981 Federal Government		
		B. S.	M. S.	Ph.D.	B. S.	M. S.	Ph.D.
Engineers	1,200,000	$22,900	$25,500	$32,800	$15,947-19,747	$ 22,925	$ 24,763
Mathematicians†	40,000	17,700	20,200	26,400	12,266-15,193	18,585-22,486	22,486-26,951
Statisticians†	26,500				12,266-15,193	18,585-22,486	22,486-26,951
Agricultural	35,000	15,400			12,266-15,193	15,193-18,585	22,486-26,951
Biological	90,000	15,200			12,266-15,193	15,193-18,585	22,486-26,951
Foresters	30,000	15,200*			12,266	15,193	18,585-22,486
Geologists	34,000	22,150	25,320		12,300-15,200	15,200-18,600	22,500-27,000
Geophysicists	12,000	22,150	25,320		12,300-15,200	15,200-18,600	22,500-27,000
Meteorologists	4,000				12,300-15,200	15,200-18,600	22,500-27,000
Chemists	113,000	19,600	23,600	29,800	12,266-15,193	18,585	22,486-26,951
Physicists	37,000	21,840	23,760	30,540	12,266-15,193	15,193-18,585	22,486-26,951
Astronomers†	3,000				38,000*		
Oceanographers	2,800				12,300-15,200	18,600-22,500	22,500-27,000
Psychologists	106,000				12,300-15,200	18,600	22,500
Anthropologists	7,200				12,300-15,200	18,600	22,500
Economists	44,000				12,300-15,200	18,600	22,500
Political Scientists	15,000				12,300-15,200	18,600	22,500
Sociologists	21,900				12,300-15,200	18,600	22,500
Programmers	228,000	250-330**			200**		
Geographers	15,000			17,000	12,300-15,200	18,600	22,500
Systems Analysts	205,000	330**			200**		

† Federal Salaries are for 1980. * Average salary all levels. ** Weekly Earnings - all degree levels.

SOURCE: Middle Atlantic Career Counseling Association, Starting Salary Offers to Graduates of Two-Year Colleges, 1981-82.

TABLE 34

STARTING SALARY OFFERS TO GRADUATES OF TWO-YEAR COLLEGES BY CURRICULUM, 1980-81 and 1981-82

CURRICULUM	No. of Offers 1981-82 Total	Average Weekly Offers		1981-82 Average Weekly Sal. Annualized
		1981-82 Total	1980-81 Total	
AGRICULTURE				
Agricultural Engineering	37	$207	$196	$10,764
Animal Husbandry	47	198	190	10,296
Food Science	59	231	227	12,012
Plant Science	33	191	189	9,932
Other	31	225	197	11,700
BUSINESS				
Accounting	41	219	201	11,388
Business, General	106	247	199	12,844
Marketing	12	212	223	11,024
Retail	20	202	188	10,504
Secretarial Science	188	212	202	11,024
Other	13	219	213	11,388
SOCIAL SCIENCE				
Child Care	11	158	159	8,216
Police Science	21	295	206	15,340
Other	13	197	163	10,244
HEALTH PROFESSION				
Dental Technology	13	256	263	13,312
Medical Technology	14	227	212	11,804
Nursing	103	283	276	14,716
Other	47	243	175	12,636
TECHNOLOGY				
Aircraft Maintenance	42	322	309	16,744
Automotive	67	234	232	12,168
Biology	18	251	244	13,052
Chemistry	37	310	306	16,120
Civil Engineering	9	264	243	13,728
Computer Science & Data Processing	117	286	272	14,872
Drafting	35	278	258	14,456
Electrical and Electronics	145	308	279	16,016
Environmental Science	15	228	206	11,856
Mechanical and Mechanical Design	91	325	278	16,900
Surveying	5	262	258	13,624
Other	34	315	253	16,380
LIBERAL ARTS				
Commercial Art	2	155	185	8,060
General Degree	10	200	178	10,400
Other	5	182	254	9,464
TOTAL	1,441			

SALARIES OF EXPERIENCED SCIENTIFIC AND TECHNICAL PERSONNEL

Three subsystems comprise the **National Science Foundation's Scientific and Technical Personnel Data System** - the **Survey of Doctorate Recipients**, the **New Entrants Survey** and the **Experienced Sample Surveys.**

Surveys of doctoral scientists and engineers are conducted by the **National Research Council** on the basis of a sample of individuals drawn from a roster of doctorate recipients. The roster was compiled from a number of sources, including the **National Academy of Sciences/National Research Council's Doctorate Records File**; the **National Science Foundation's National Register of Scientific and Technical Personnel**, which from 1954 through 1970 collected information on highly qualified personnel in science fields; **American Men and Women of Science**; and several other sources including university and college catalogs of doctorate-granting institutions; federal laboratories; and selected industrial organizations. The 1981 population consists of individuals who earned doctorates within the 42-year period 1938-80. Included in this population are individuals who earned a doctorate at U.S. institutions in the natural or social sciences, mathematics, and engineering, as well as individuals who received research doctorates in non-S/E fields but were known to be employed as scientists or engineers. In addition, the population included individuals who had earned their doctorates at foreign institutions and were known to be working in the U.S. as scientists or engineers.

• The 1981 **Survey of Doctorate Recipients**, the fifth in a biennial series first conducted in 1973, included a sample of approximately 50,000 scientists and engineers. Data from this survey were published by the **National Science Foundation** in **CHARACTERISTICS OF DOCTORAL SCIENTISTS AND ENGINEERS IN THE UNITED STATES: 1981** and by the **National Research Council** in **SCIENCE, ENGINEERING AND HUMANITIES DOCTORATES IN THE UNITED STATES, 1981 PROFILE.**

The median annual salary for all doctoral scientists and engineers in 1981 was $34,700, with those employed by business and industry and in the federal government receiving the highest median salary - $40,300. Salaries paid by state governments were the lowest of all - $29,300 - 15.6% below the overall median. Economists working for the federal government recorded the highest median salary in 1981 - $46,700 - followed by medical scientists working in business and industry at $45,700 (Table 35). Table 36 presents detailed data on salaries paid to doctoral scientists and engineers employed in business and industry in 1977, 1979, and 1981 showing a 34.8% increase in salaries paid to doctoral scientists and engineers in the five years covered. The largest percentage increase was to life scientists - 38.3%.

Teaching, the dominant work activity of doctoral scientists and engineers, continues to provide the lowest annual salary. In 1981, the median annual salary of Ph.D.'s who reported teaching as their primary work activity was $30,100 - $13,100 below that of doctoral scientists and engineers who reported the management or administration of R & D as their primary work activity. Economists engaged in management or administration of R & D reported the highest median salary - $50,400 (Table 37).

By geographic area, doctoral scientists and engineers working in the South Atlantic region reported the highest median annual salaries, while those working in the east south central and west north central reported the lowest. Economists working in the South Atlantic area reported the highest salaries - $44,000 (Table 38). Median annual salaries of doctoral scientists and engineers by years of professional experience and age in 1981 are presented in Tables 39 and 40.

In 1981, women doctorates earned considerably less than their male counterparts regardless of field or experience level. By field of doctorate, women doctoral scientists and engineers had a median annual salary $8,600 less than men. Women doctoral engineers reported the highest salaries in 1981 - $32,800 - and women agricultural scientists the lowest - $24,900 (Table 41). Among minority groups, American Indian doctoral scientists and engineers reported the highest median salary in 1981 - $35,500 (Table 42).

• The **New Entrants Survey** provides data on recent bachelor's and master's degree recipients in science and engineering fields who have entered the labor force. The 1980 survey of 1978-79 bachelor's and master's degree graduates finds that women continue to earn less than their male counterparts two years after receipt of their degree. In all science and engineering fields in 1980, women bachelor's degree graduates of 1978-79 had a median annual salary $5,400 less than their male counterparts. Although women baccalaureates employed in science and engineering had a higher salary than those not employed in science and engineering - the gap between men and women was wider for those engaged in S/E employment (Table 43). Similar information for master's degree recipients in 1978-79 is presented in Table 44. By field of employment, women had lower annual salaries than did men at both degree levels, except in the biological sciences where bachelor's degree women reported a median annual salary of $12,000, while men reported $11,800 (Table 45).

• The **Biennial Survey of Education and Occupational Status of Recent College Graduates** conducted by the **National Center for Education Statistics** provides data on the employment and education experience of recent college graduates with special emphasis on enumerating additions to the supply of teachers. Table 46 provides data on the number of 1979-80 bachelor's degree recipients employed in selected occupations as of May 1981 as well as their average annual 1981 salary. Overall, bachelor's degree recipients had an annual salary of $15,300. Those employed in engineering ($22,900) and computer science ($19,800) were earning salaries well above the average.

• The **1982 NATIONAL SURVEY OF COMPENSATION PAID SCIENTISTS AND ENGINEERS ENGAGED IN RESEARCH AND DEVELOPMENT ACTIVITIES**, which is conducted by the **Battelle Columbus Laboratories** for the **U.S. Department of Energy**, presents salary data from 2,102 establishments employing 530,916 scientists and engineers spending more than half of their time in research and development activities.

By working-as-occupation, aeronautical and astronautical engineers reported the highest mean monthly salary at both the bachelor's and master's degree levels, while electrical and electronic engineers reported the highest salary at the doctoral level among nonsupervisory scientists and engineers working in R & D in 1982. Agricultural and biological scientists reported the lowest monthly mean salaries at all three degree levels (Tables 47, 48 and 49).

By type of establishment, contract research centers paid nonsupervisory scientists and engineers the highest salaries at both the bachelor's and master's degree level, while industry paid doctoral scientists and engineers the most. Educational institutions paid the least at all three degree levels (Table 50).

By highest degree field, physicists at the bachelor's level and engineers at the master's and doctoral levels earned the highest mean monthly salaries working in R & D in 1982. At all three degree levels, life scientists earned the lowest salaries (Table 51).

Women continue to earn substantially less than their male counterparts working in R & D regardless of field, degree level or work experience (Table 52). Of professional degreed scientists and engineers working in research and development, those with a doctor's degree in veterinary medicine earned the highest salaries (Table 53).

• Another survey of scientists and engineers engaged in R & D activities by **INDUSTRIAL RESEARCH** finds that salaries of R & D workers are continuing to increase, but at a reduced rate. The median salary of R & D workers increased 7.7% from 1982 to $36,260 in 1983. Additionally, the 1983 survey found a new upper end - $64,000 per year or more. In 1983, 19.6% of all workers in R & D are earning $46,000 or more, and 2.1% report salaries of $64,000 or more (Chart 3). Chart 4 presents salaries of scientists and engineers working in R & D by type of employer in 1983.

By profession, aeronautical engineers reported the highest median salary in 1983 - $41,150 - while industrial engineers reported the lowest - $30,520. However, biologists reported the highest percentage increase from 1982 to 1983 (11.1%), while metallurgists reported the lowest - 1.8% (Table 54).

The income advantages of baccalaureate and advanced degrees are increasing faster than inflation, although the rate of increase has slowed. In 1983, the advantage in annual income for a Ph.D. over less-than-bachelor's degree is $12,920, down 6% from 1982, but still well above the $9,994 spread in 1981 (Table 55).

• Average salaries for selected white-collar occupations in private industry in medium- and large-size establishments increased less in the year ended March 31, 1983 than in the previous two years, according to data from the annual **NATIONAL SURVEY OF PROFESSIONAL, ADMINISTRATIVE, TECHNICAL AND CLERICAL PAY** conducted by the **Bureau of Labor Statistics** of the U.S. Department of Labor. March 1983 average monthly salaries for eight levels of engineers, the largest professional group studied, ranged from $2,130 for college graduates in trainee positions to $5,578 for those responsible for highly complex engineering programs. Chemists' salaries ranged from $1,780 in level I to $5,039 in level VII, the highest level meeting BLS publication standards. Level IV engineers and chemists, the largest groups in each profession and representing fully experienced employees, averaged $3,061 and $2,953 a month, respectively. Salaries of accountants ranged from $1,627 a month at level I to $4,317 at level VI. Programmer and programmer analyst trainees developing basic programming skills averaged $1,648 a month; those at the highest level (V), who do some systems analysis work in addition to complex programming, averaged $3,177 (Table 56). Table 57 presents similar data for March 1982 for comparison.

• The sixth annual **SCIENTIFIC SALARIES SURVEY**, conducted by **D. Dietrich Associates, Inc.**, finds an average salary of $32,264 as of May 1, 1982 for the 5,687 scientists reported by 108 firms. These salaries ranged from a weighted average salary of $19,824 at the entry level to $54,705 for department heads (Table 58).

Where a scientist works is a major determinant of salary. Scientists at the entry level had higher salaries working for the government and lower ones working for consulting firms. However, at the higher responsibility level, those working for research and development firms reported the highest salaries (Table 59). Average salaries of scientists by discipline and level of responsibility for 1982 are reported in Table 60.

• **SALARIES 1983,** the annual analysis of the **American Chemical Society's** survey of salaries and employment, finds that the median annual salary for chemists increased a moderate 4% from 1982 to 1983, consisting of a 5.3% increase at the bachelor's level, 4.4% at the master's and 6.7% at the doctoral level. However, for chemical engineers, only Ph.D.'s are earning median annual salaries higher than last year's - up 7.8% (Table 61).

Although men and women chemists, at all three degree levels, earn similar salaries at the beginning of their careers, experienced women earn substantially less than men. Part of the reason that women's overall average salary is less than men's as a group, is that ACS women are younger than the men (Table 62). This is true regardless of where women work. In private industry, women had a median annual salary $5,400 less than did comparable men at the bachelor's level, $6,200 less at the master's, and $6,700 less at the Ph.D. level (Table 63). Increasing time in the workplace widens the gap between men's and women's salaries as is shown in Tables 62 and 64.

Factors other than experience also are involved in determining salary levels. Management jobs tend to be the highest-paying positions for both men and women chemists in industry at all degree levels (Table 65).

At the B.S. level, physical chemists reported the highest median salary of $38,000, while biochemists reported the lowest at $24,000. Inorganic chemists earn the highest salaries of $40,400 at the master's level - $10,400 more than the biochemists who reported a median salary of $30,000. At the doctoral level, environmental chemists earn the most ($47,000) and analytical chemists the least ($40,690) (Table 66).

Geographic region is also a factor in salary levels. Both B.S. and M.S. chemists reported the highest median salary in the West South Central area, while Ph.D.'s working in the Middle Atlantic region earned the most (Table 67). Table 70 presents additional geographic salary information for selected states.

Chemists working in the petroleum industry, which employs almost 7% of all industrial chemists, are paid the highest salaries. In general, the chemical industry ranks second in salaries and employs about one-third of all responding industrial chemists (Table 68). Salaries paid to chemists in private industry by degree level and number of subordinates are shown in Table 69.

As in other fields, those chemists working in industry have higher salaries than do other chemists. A comparison of salaries paid chemists working in industry with all chemists is shown in Table 71.

Although bachelor's and master's level chemical engineers reported no increase in median salaries from 1982 to 1983, chemical engineers continue to earn more than chemists at all degree levels as shown in Table 72.

• The annual salary survey conducted by **INDUSTRIAL CHEMICAL NEWS** found average salaries for experienced chemists increased significantly from 1981 to 1982. For the B.S. chemist, the increase was 23%, for an M.S. 19%, and for a Ph.D., 9.5% (Table 73).

• The median annual salary of members of the **American Institute of Chemists** increased 12.5% at the bachelor's level, 20.6% at the master's and 21.6% at the doctoral level from 1980 to 1982 according to the AIC salary survey. Overall, B.S.

chemists reported an annual salary of $31,500; M.S. chemists, $38,000; and doctoral chemists, $45,000 (Table 74).

As was true in the survey by the American Chemical Society of its membership, AIC finds that chemical specialty enters into salary levels. Although chemical engineers who were members of the AIC reported the highest median salary, among chemists, polymer chemists reported the highest salary while biochemists reported the lowest (Table 75). Again, AIC found that chemists in management are paid the most, while those in teaching are paid the least (Table 76).

Median annual salaries are highest for AIC members working along the Atlantic seaboard - in part, because this is the heartland of the chemical industry and thus tends to attract more chemists and pay them better (Table 77).

• The 26th annual salary survey conducted by the **AMERICAN MATHEMATICAL SOCIETY** found that women were earning slightly higher salaries than men after one year of academic experience in teaching and/or research, but were earning less working in business and industry and government (Table 78).

• The largest percentage of respondents to the 1982 salary survey conducted by the **American Psychological Association** was employed in faculty positions. For those psychologists not employed in faculty positions, the highest median 11-12 month salary of $43,700 for doctoral-level APA members was reported by those working in administration of applied psychology while the lowest was reported by those working in direct human services (school psychology) - $25,958. At the master's level, psychologists working in administration or applied psychology earned the most, while those working in direct human services (clinical psychology) earned the least - $40,000 and $24,281 respectively. Salaries of doctoral and master's level psychologists by type of position and years of work experience are shown in Tables 79 and 80.

• Salary information collected by the **American Institute of Physics** and reported in its **SOCIETY MEMBERSHIP 1981 PROFILE; AN EXPANDED VIEW** finds that the median annual salary of physicists who were members of the AIP was $35,000 in 1981. Interestingly, bachelor's level physicists reported higher salaries than did master's degree physicists (Table 81).

As was true for other disciplines, physicists working in administration reported the highest salaries while those teaching reported the lowest (Table 82). Salaries of doctoral-level physicists by years since the Ph.D. are reported in Table 83.

Where a physicist works has an effect on salary. Physicists at all degree levels earned more working in industry and least working in secondary schools (Table 84).

Women earn lower salaries than men, regardless of employment setting. In industry, men had an average salary $11,000 higher than did women, while in academe, they earned $8,000 more (Table 85).

AIP doctoral-level physicists working in the Pacific region reported the highest median salaries in 1981 - $38,000 - while those working in the west north central reported the lowest - $31,000 (Table 86).

• Data processing (DP) salaries increased 5.1% from 1982 to 1983, according to the findings in **INFOSYSTEMS'** 25th annual salary survey. This increase compares to a 4% rise in the previous year's survey. Thirty-five occupational DP groups were included in the survey, with results based on replies from 12,991 individuals in 1,292 operations. Average salaries ranged from a high of $959 per week for top management officials to a low of $222 a week for junior key entry operators (Table 87). Salaries by geographic area and type of DP position for 1983 are shown in Table 88.

There is no single industry which pays data processing personnel the highest salaries since the differences vary with type of DP position. Average weekly salaries for DP personnel in 1983 by job description and type of industry are shown in Table 89.

• The **Association of Data Processing Services Organization (ADAPSO)** in its **1983 ADAPSO Compensation Survey** found total compensation levels of employees increased during the year ending March 1983 by approximately 8.8%. Mid-level management averaged an increase of 14.2% while technical personnel in systems and programming jobs experienced an increase of 6.7%.

Salaries of selected data processing personnel by level of responsibility and geographic area vary. Lead operating systems/software programmer/analysts earned the highest salary in California and Hawaii, while lead software engineers earned the most in the Southeast. Salaries of all levels of various functional positions broken out by level of responsibility and geographic area for 1983 are shown in Tables 91-95.

• The **FIRST ANNUAL SYSTEMS AND PROCESSING SALARIES REPORT** conducted by the **Administrative Management Society** includes data on 63,500 systems and processing employees in 2,602 companies in 105 cities in North America. The survey reports annual basic compensation in effect on September 17, 1982 on 20 key EDP positions in computer operations, data entry operations, applications programming and software systems programming.

The highest average base compensation reported for systems and processing personnel employed in the United States is $36,100 for a manager of software systems programming, with a manager of applications programming a close second, earning $36,000 per year. Median salaries of DP personnel by occupation and geographic area are shown in Table 96.

Generally, those DP personnel working in utilities firms reported the highest median salaries while those working in data processing service bureaus earned the least. Salaries by type of business and occupational title for DP personnel are shown in Table 97.

• Salary levels for computer professionals have continued to increase across the board, according to the **1983 COMPUTER SALARY SURVEY AND CAREER PLANNING GUIDE** by **SOURCE EDP.** The 1983 survey is based on an analysis of the more than 50,000 computer professionals. Salaries of non-management computer professionals by position and length of experience in 1983 are shown in Table 98.

Management computer professionals earn the highest salaries working in large computer system firms and the lowest working in small computer system firms. The highest salary was reported for information system directors working in large computer systems - $60,300, while the lowest salary was reported for operations managers working in small computer systems - $27,100 (Table 99).

• A **Salary Study of State Geological Surveys** by the **American Geological Institute** finds that 1982 salaries ranged from a low of $13,624 for an assistant geologist to a high of $77,760 for a state geologist. Low, high and median salaries for geologists by level of responsibility are shown in Table 100.

• The fourteenth annual edition of **POSITION CLASSIFICATION AND PAY IN STATE AND TERRITORIAL PUBLIC HEALTH LABORATORIES** by the **U.S. Department of Health and Human Resources, Public Health Service** presents average annual salaries for selected technical positions. The 1983 survey finds Alaska leading all states in salaries for entry-level technical personnel and for administrators (Table 101). Average salaries in 1983 ranged from a low of $10,339 for entering lab aides to a high of $38,753 for lab directors (Table 102).

• The second annual **LABORATORY TECHNICIAN SALARIES' SURVEY** by **D. Dietrich Associates, Inc.** includes information from 101 participating firms who reported salaries paid to 4,767 technicians in seven position levels. Weighted average salaries ranged from a low of $5.34 per hour for laboratory aide/trainees to a high of $12.15 per hour for supervisory laboratory technicians (Table 103).

• Accountants working in public accounting firms in the Chicago area reported the highest average salaries in 1982 - $37,474 - according to the fourth annual survey of salaries of accounting/financial personnel conducted by **Abbott, Langer & Associates.** By position, average salaries ranged from a high of $98,275 for senior partners working in the San Francisco area to a low of $19,511 for supervisory accountants/auditors working in the northeastern states (Table 104). Accounting/financial personnel who have earned the master's degree generally report higher salaries than those with less than a bachelor's or just a bachelor's degree (Table 105).

Accounting/financial personnel working in industry, government, education or nonprofit organizations generally report higher salaries than those working in public accounting firms. Mean and median annual salaries by type of position and geographic area for such personnel working in the private sector are shown in Table 106. Similar information for accounting/financial personnel by level of education is shown in Table 106.

• Women working in managerial and professional occupations reported median weeking earnings in 1983 of $209-$352 or 34.1% less than the $357-$534 medians reported by men working in these occupations, according to data from the **U.S. Department of Labor, Bureau of Labor Statistics.** Regardless of occupation - from managerial and professional to technical, sales and administrative support - women reported lower median weekly earnings than did men in similar positions (Table 108).

SOURCE: National Science Foundation, Characteristics of Doctoral Scientists and Engineers in the United States, 1981, NSF 82-332.

TABLE 35

MEDIAN ANNUAL SALARIES OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD AND TYPE OF EMPLOYER, 1981

FIELD	TOTAL	TYPE OF EMPLOYER								
		Business & Industry	EDUCATIONAL INSTITUTIONS				Hospital/ Clinic	Non-Profit Organi-zation	Federal Govern-ment	State Govern-ment
			Total	4-Year Colleges	2-Year Colleges	Elem./Sec. School				
ALL FIELDS	$34,700	$40,300	$31,100	$31,300	$28,200	$28,700	$31,000	$34,800	$40,300	$29,300
PHYSICAL SCIENTISTS	36,200	39,900	31,700	31,900	29,700	21,900	33,400	35,500	40,100	26,400
Chemists	36,200	39,900	30,700	30,900	29,800	21,600	30,600	35,600	39,100	23,800
Physicists/Astronomers	36,100	39,800	33,500	33,700	29,700			35,400	42,200	
MATHEMATICAL SCIENTISTS	31,300	37,100	30,500	30,600	25,500			36,000	40,200	
Mathematicians	30,900	36,800	30,400	30,600	25,500			36,000	40,800	
Statisticians	34,600	37,700	31,300	31,400					39,200	
COMPUTER SPECIALISTS	34,400	36,200	30,700	30,700				40,400	38,700	
ENVIRONMENTAL SCIENTISTS	36,500	40,800	31,200	31,300				37,800	40,700	27,800
Earth Scientists	37,000	43,000	31,600	31,800				39,300	40,900	26,700
Oceanographers	32,100		28,500	28,500					40,200	
Atmospheric Scientists	36,300	38,100	31,500	31,500				38,100	41,200	
ENGINEERS	40,200	41,300	36,400	36,400				40,500	42,600	
LIFE SCIENTISTS	33,200	39,700	31,000	31,100	26,700		35,600	33,000	38,300	29,500
Biological Scientists	31,600	36,500	29,900	30,000	26,900		35,200	33,000	37,700	25,600
Agricultural Scientists	33,600	36,200	31,400	31,400				33,800	38,500	29,800
Medical Scientists	37,900	45,700	35,400	35,400			40,300	31,400	40,700	31,100
PSYCHOLOGISTS	30,700	40,300	29,100	29,000	28,400	30,400	30,100	28,600	39,000	29,200
SOCIAL SCIENTISTS	30,800	39,000	29,700	29,800	26,800	26,300		30,200	44,400	29,700
Economists	36,500	42,400	33,200	33,300				34,900	46,700	
Sociologists/Anthropologists	28,500	24,900	28,400	28,500				27,400		
Other Social Scientists	29,900	35,500	29,100	29,200	27,600	26,600		28,200	44,200	29,400

NOTE: Median salaries computed only for full-time employed civilians.
No median was computed for groups with fewer than 20 individuals reporting salary.

SOURCE: National Science Foundation, Characteristics of Doctoral Scientists and Engineers in the United States, 1981, NSF 82-332.

TABLE 36

NUMBER AND MEDIAN ANNUAL SALARIES OF DOCTORAL SCIENTISTS AND ENGINEERS EMPLOYED IN BUSINESS AND INDUSTRY BY FIELD, 1977-81

FIELD	1977				1979				1981			
	Number	Percent	Percent of total employed	Median annual salary	Number	Percent	Percent of total employed	Median annual salary	Number	Percent	Percent of total employed	Median annual salary
ALL FIELDS	71,475	100.0	25.1	$29,900	82,824	100.0	26.4	$33,800	99,020	100.0	28.8	$40,300
PHYSICAL SCIENTISTS	22,980	32.2	40.0	29,900	25,003	30.2	41.6	33,100	27,401	27.7	43.4	39,900
Chemists	18,664	26.1	50.0	30,000	20,524	24.8	51.9	32,900	22,250	22.5	53.0	39,900
Physicists/Astronomers	4,316	6.0	21.4	29,700	4,479	5.4	21.7	34,000	5,151	5.2	24.3	39,800
MATHEMATICAL SCIENTISTS	1,282	1.8	8.8	27,400	1,445	1.7	9.4	30,800	1,621	1.6	10.4	37,100
Mathematicians	996	1.4	7.7	27,390	1,175	1.4	9.1	30,900	1,159	1.2	8.9	36,800
Statisticians	286	0.4	16.7	27,600	270	0.3	11.4		462	0.5	18.1	37,700
COMPUTER SPECIALISTS	3,058	4.3	53.0	26,700	3,671	4.4	54.5	29,600	5,212	5.3	57.6	36,200
ENVIRONMENTAL SCIENTISTS	3,103	4.3	23.8	28,600	4,246	5.1	29.1	34,000	4,788	4.8	29.9	40,800
Earth Scientists	2,700	3.8	27.6	28,600	3,777	4.6	33.9	34,100	4,213.	4.3	34.8	43,000
Oceanographers	135	0.2	8.6		222	0.3	13.4		184	0.2	10.3	
Atmospheric Scientists	268	0.4	15.8	29,200	247	0.3	13.7		391	0.4	18.4	38,100
ENGINEERS	22,870	32.0	50.8	30,000	26,438	31.9	52.6	35,000	31,659	32.0	55.6	41,300
LIFE SCIENTISTS	10,075	14.1	14.0	28,700	11,464	13.8	14.3	33,300	13,473	13.6	15.5	39,700
Biological Scientists	4,011	5.6	9.5	27,400	4,344	5.2	9.5	32,700	5,330	5.4	10.7	36,500
Agricultural Scientists	2,858	4.0	20.0	26,800	3,384	4.1	22.5	30,500	3,450	3.5	21.7	36,200
Medical Scientists	3,206	4.5	20.7	33,200	3,736	4.5	19.4	37,600	4,693	4.7	22.2	45,700
PSYCHOLOGISTS	5,525	7.7	16.4	33,300	7,076	8.5	18.6	38,100	10,145	10.2	23.6	40,300
SOCIAL SCIENTISTS	2,582	3.6	6.0	30,200	3,481	4.2	7.2	32,400	4,721	4.8	8.9	39,000
Economists	1,385	1.9	12.8	34,100	1,568	1.9	13.4	37,200	2,161	2.2	16.1	42,400
Sociologists/Anthropologists	193	0.3	2.0		287	0.3	2.8		487	0.5	4.4	24,900
Other Social Scientists	1,004	1.4	4.5	26,800	1,626	2.0	6.1	30,400	2,073	2.1	7.3	35,500

NOTE: Percents may not add to 100 because of rounding. Median salaries computed for full-time civilians only. No median was computed for groups with fewer than 20 individuals reporting salary.

SOURCE: National Science Foundation, Characteristics of Doctoral Scientists and Engineers in the United States, 1981, NSF 82-332.

TABLE 37

MEDIAN ANNUAL SALARIES OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD AND PRIMARY WORK ACTIVITY, 1981

FIELD	Total	RESEARCH & DEVELOPMENT				MANAGEMENT OR ADMIN.			Teaching	Consulting	Sales Prof. Serv.	Other	No Report
		Total	Basic Research	Applied Research	Development	Total	of R&D	Other than R&D					
ALL FIELDS	$34,700	$35,200	$33,100	$36,000	$36,500	$43,200	$45,800	$39,900	$30,100	$39,500	$34,900	$34,600	$35,200
PHYSICAL SCIENTISTS	36,200	35,800	35,000	36,300	35,800	45,900	47,700	41,300	30,500	36,700	40,100	38,100	44,100
Chemists	36,200	35,500	35,100	35,700	35,400	45,300	45,800	42,000	29,700		40,800	39,700	
Physicists/Astronomers	36,100	36,400	34,900	38,900	37,000	48,200	50,000	40,500	31,500		35,700	34,100	
MATHEMATICAL SCIENTISTS	31,300	34,500	31,200	36,900	35,500	39,800	49,300	39,000	29,700	38,500	36,500	27,300	
Mathematicians	30,900	33,600	30,900	38,700	32,600	39,600	49,100	38,500	29,700			27,300	
Statisticians	34,600	36,200		36,000					29,500				
COMPUTER SPECIALISTS	34,400	34,500	34,400	38,300	33,300	40,200	44,300	36,300	30,300	37,300		22,200	
ENVIRONMENTAL SCIENTISTS	36,500	36,100	34,400	37,700	31,900	44,300	44,300	44,200	30,300	39,500	40,100	34,100	
Earth Scientists	37,000	38,200	37,100	38,800	33,800	44,800	43,900	48,700	30,400	39,300	40,200	34,000	
Oceanographers	32,100	29,300	30,400	22,600		40,400	40,500		28,500				
Atmospheric Scientists	36,300	35,000	32,100	37,100		47,600	49,200		27,800				
ENGINEERS	40,200	37,900	38,900	37,900	37,700	47,100	47,200	46,900	34,600	40,800	40,100	42,200	
LIFE SCIENTISTS	33,200	32,400	32,000	32,800	34,000	42,300	44,900	39,700	29,800	38,600	41,800	32,700	35,300
Biological Scientists	31,600	31,800	31,400	32,400	31,000	41,700	43,400	39,100	28,800	35,900	37,200	32,600	33,500
Agricultural Scientists	33,600	32,600	31,400	32,800	35,200	42,400	44,000	41,300	30,000	35,800	32,600	30,900	35,100
Medical Scientists	37,900	35,300	35,000	35,300	37,700	43,000	46,700	38,500	33,900	45,900	46,300	36,700	39,500
PSYCHOLOGISTS	30,700	31,200	28,600	32,000	35,300	35,100	39,100	33,800	28,600	34,200	30,700	30,400	34,200
SOCIAL SCIENTISTS	30,800	33,400	31,000	35,800		38,500	42,600	37,100	29,000	34,300	30,900	33,100	32,600
Economists	36,500	38,700	34,300	42,100		48,100	50,400	47,000	31,100	40,300		49,300	
Sociologists/Anthropologists	28,500	28,900	28,300	29,400		35,300		36,000	27,400			24,500	
Other Social Scientists	29,900	30,800	30,500	32,200		36,500	39,800	35,800	28,200	28,300	30,800	30,400	29,100

NOTE: All median salaries were computed only for full-time employed civilians.

No median was computed for groups with fewer than 20 individuals reporting salary.

SOURCE: National Science Foundation, Characteristics of Doctoral Scientists and Engineers in the United States, 1981, NSF 82-332.

TABLE 38

MEDIAN ANNUAL SALARIES OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD AND GEOGRAPHIC AREA, 1981

FIELD	Total	GEOGRAPHIC AREA								
		New England	Middle Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific
ALL FIELDS	$34,700	$32,400	$35,900	$33,900	$31,600	$36,200	$31,600	$34,300	$34,400	$36,100
PHYSICAL SCIENTISTS	36,200	35,100	37,100	35,300	32,100	37,600	33,600	33,900	36,300	37,700
Chemists	36,200	35,600	37,900	35,800	31,300	37,100	34,600	33,900	35,700	37,300
Physicists/Astronomers	36,100	33,700	36,300	33,700	33,400	39,200	32,400	33,800	36,700	38,400
MATHEMATICAL SCIENTISTS	31,300	30,000	35,200	31,200	29,200	31,800	27,100	30,500	33,400	33,400
Mathematicians	30,900	31,000	34,100	30,400	27,900	30,900	26,400	30,200	33,900	33,400
Statisticians	34,600	26,400	40,200	36,800		34,600				31,900
COMPUTER SPECIALISTS	34,400	31,200	38,700	33,500	30,200	34,100	29,000	34,600	36,200	35,000
ENVIRONMENTAL SCIENTISTS	36,500	33,500	34,800	33,600	29,800	36,900	36,300	39,700	39,100.	36,700
Earth Scientists	37,000	37,200	34,800	33,700	32,300	37,000	41,800	40,200	39,100	36,900
Oceanographers	32,100	29,400				34,800				33,700
Atmospheric Scientists	36,300					37,500			38,800	38,300
ENGINEERS	40,200	38,800	40,900.	37,700	38,900	40,900	38,100	41,000	39,200	40,500
LIFE SCIENTISTS	33,200	30,100	34,800	34,400	32,000	34,800	30,200	32,500	31,200	33,300
Biological Scientists	31,600	27,300	32,700	32,300	30,800	33,300	29,200	29,500	30,200	32,600
Agricultural Scientists	33,600	30,500	34,600	35,700	31,700	35,400	32,000	33,000	31,900	33,500
Medical Scientists	37,900	36,700	39,400	38,600	38,100	38,700	35,100	37,300	34,500	36,800
PSYCHOLOGISTS	30,700	28,000	31,100	29,900	30,800	31,500	28,400	30,900	30,800	33,700
SOCIAL SCIENTISTS	30,800	29,100	30,400	30,400	27,400	36,100	30,500	28,100	30,200	33,500
Economists	36,500	32,200	36,200	31,400	33,700	44,000		36,000		41,600
Sociologists/Anthropologists	28,500	33,100	26,600	27,600	27,300	28,400	26,900	26,100	30,200	30,200
Other Social Scientists	29,900	28,000	29,900	31,000	25,900	33,300	30,400	26,800	28,500	31,500

NOTE: All median salaries were computed only for full-time employed civilians.

No median was computed for groups with fewer than 20 individuals reporting salary.

SOURCE: National Science Foundation, Characteristics of Doctoral Scientists and Engineers in the United States, 1981, NSF 82-332.

TABLE 39

MEDIAN ANNUAL SALARIES OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD AND YEARS OF PROFESSIONAL EXPERIENCE, 1981

FIELD	Total	YEARS OF PROFESSIONAL EXPERIENCE										
		1 or less	2-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 or more	No report
ALL FIELDS	$34,700	$25,300	$25,200	$28,600	$33,400	$36,700	$39,700	$42,200	$42,400	$44,300	$45,000	$36,200
PHYSICAL SCIENTISTS	36,200	29,000	29,300	31,100	35,200	38,100	39,500	44,700	45,800	45,500	48,000	37,000
Chemists	36,200	29,200	30,100	31,000	35,400	38,600	39,000	44,800	47,000	41,300	45,300	37,900
Physicists/Astronomers	36,100		28,100	31,300	34,700	37,000	40,200	44,400	45,300	46,500	49,800	35,700
MATHEMATICAL SCIENTISTS	31,300		20,700	25,300	30,100	32,900	36,400	38,200	42,000	40,900	42,800	33,200
Mathematicians	30,900		20,600	24,800	29,600	32,200	36,400	36,700	41,900	42,100		32,700
Statisticians	34,600			28,000	34,500	37,800		47,100				38,500
COMPUTER SPECIALISTS	34,400		27,800	31,300	33,900	35,700	42,000	48,000	41,200			37,000
ENVIRONMENTAL SCIENTISTS	36,500		26,700	31,400	34,600	39,100	40,900	46,200	42,800	50,200	50,300	39,700
Earth Scientists	37,000		28,700	32,800	34,600	37,300	41,000	46,500	42,600	50,100		39,700
Oceanographers	32,100			25,300	31,800	39,500						43,500
Atmospheric Scientists	36,300			29,000	38,400							
ENGINEERS	40,200	28,900	32,600	34,900	39,500	42,300	42,500	45,300	46,100	50,000	48,500	41,400
LIFE SCIENTISTS	33,200	23,200	23,800	26,900	31,700	35,500	39,200	40,600	41,400	45,200	46,000	34,900
Biological Scientists	31,600	20,700	22,200	25,900	30,300	34,100	38,500	40,500	41,200	44,100	46,400	32,900
Agricultural Scientists	33,600		24,600	27,000	31,100	36,000	36,900	39,100	40,400	42,800	34,900	34,700
Medical Scientists	37,900	24,500	26,500	30,100	37,500	39,700	44,100	46,700	45,600	49,800	50,500	40,400
PSYCHOLOGISTS	30,700		22,100	25,400	30,600	34,200	35,900	37,800	40,300	37,600	34,700	35,400
SOCIAL SCIENTISTS	30,800	20,500	22,800	25,100	30,000	33,900	34,800	37,400	42,000	39,500	40,200	31,400
Economists	36,500		28,700	29,100	36,300	38,800	40,300	37,900	49,900			37,500
Sociologists/Anthropologists	28,500		21,000	24,000	26,700	33,200	33,700	32,400	40,600			30,200
Other Social Scientists	29,900		21,700	24,800	28,800	32,000	34,200	38,700	39,200	39,800	36,800	30,300

NOTE: All median salaries were computed only for full-time employed civilians.

No median was computed for groups with fewer than 20 individuals reporting salary.

SOURCE: National Science Foundation, Characteristics of Doctoral Scientists and Engineers in the United States, 1981, NSF 82-332.

TABLE 40

MEDIAN ANNUAL SALARIES OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD AND AGE, 1981

FIELD	Total	AGE									
		Under 30	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70 & Over
ALL FIELDS	$34,700	$25,900	$27,500	$31,400	$35,500	$37,600	$40,200	$41,500	$41,100	$42,200	$36,500
PHYSICAL SCIENTISTS	36,200	28,900	30,000	33,300	36,400	38,200	40,900	46,600	42,200	43,300	
Chemists	36,200	29,600	30,500	32,800	36,600	39,000	41,000	48,400	41,800	43,200	
Physicists/Astronomers	36,100	27,800	28,900	34,000	36,300	36,700	40,800	45,200	43,000	46,200	
MATHEMATICAL SCIENTISTS	31,300	22,400	23,300	29,100	32,300	36,100	37,800	40,700	40,500	42,200	
Mathematicians	30,900	22,100	23,500	28,900	31,100	35,800	36,900	40,300	40,500	41,000	
Statisticians	34,600		24,400	32,200	39,300	36,300	40,200				
COMPUTER SPECIALISTS	34,400		31,000	33,300	35,900	37,200	39,900	38,600			
ENVIRONMENTAL SCIENTISTS	36,500	22,300	28,700	33,000	37,300	41,900	44,600	43,200	50,000	42,300	
Earth Scientists	37,000		30,800	34,600	36,900	41,300	44,700	43,100	50,200	40,900	
Oceanographers	32,100		24,300	26,800	34,100	40,700					
Atmospheric Scientists	36,300		26,600	35,000	41,000						
ENGINEERS	40,200	32,200	33,700	38,100	40,800	42,500	45,600	46,400	44,400	48,400	
LIFE SCIENTISTS	33,200	24,500	25,000	29,200	33,800	36,300	40,200	40,700	41,000	43,000	
Biological Scientists	31,600	22,500	24,200	28,000	32,600	34,800	39,800	39,700	39,400	41,900	
Agricultural Scientists	33,600	26,500	25,300	29,300	33,700	35,300	39,700	40,000	39,900	37,900	
Medical Scientists	37,900		28,100	33,200	38,400	42,700	42,100	48,300	47,800	50,200	
PSYCHOLOGISTS	30,700	21,400	24,500	28,100	33,000	35,100	36,100	36,900	40,100	35,800	
SOCIAL SCIENTISTS	30,800	25,500	24,600	28,300	30,500	33,500	34,500	37,700	37,900	41,700	
Economists	36,500		28,300	37,000	36,700	39,800	37,200	41,700	39,900	48,300	
Sociologists/Anthropologists	28,500		22,900	23,800	28,700	31,000	32,500	36,900	34,800	42,600	
Other Social Scientists	29,900		23,700	27,500	30,100	33,200	34,100	37,100	37,600	40,000	

NOTE: All median salaries were computed only for full-time employed civilians.

No median was computed for groups with fewer than 20 individuals reporting salary.

SOURCE: National Research Council, Science, Engineering and Humanities Doctorates in the United States, 1981 Profile.

TABLE 41

AVERAGE ANNUAL SALARIES OF DOCTORAL SCIENTISTS & ENGINEERS BY FIELD OF DOCTORATE, YEARS SINCE Ph.D. AND SEX, 1981

FIELD OF DOCTORATE	YEARS SINCE DEGREE														TOTAL	
	5 or Less		6-10		11-15		16-20		21-25		26-30		Over 30			
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
ALL FIELDS	$27,500	$23,600	$32,100	$26,800	$36,900	$30,300	$40,100	$33,100	$42,200	$34,500	$45,800	$36,800	$47,500	$35,600	$35,700	$27,100
Mathematical Scientists	23,900	23,700	29,200	26,200	33,200	29,200	37,500		42,100				47,800		32,300	27,000
Computer Scientists	32,500	29,800	36,900												35,300	30,800
Physicists/Astronomers	29,800	28,200	34,700	30,600	37,300	30,300			43,900		48,500		47,400		37,000	30,800
Chemists	29,800	28,000	33,900	28,900	37,300	29,500	41,100	31,300	41,800	33,200	46,200				37,400	29,500
Earth/Environmental Scientists	28,000	26,300	32,900	29,100	38,700	30,300	39,700								35,300	29,400
Engineers	33,100	31,100	37,900	35,100	42,500	36,100	45,300		48,400		50,200		50,300		40,200	32,800
Agricultural Scientists	25,600	23,600	30,400	26,500	35,200		37,500		38,200		41,000		42,000		33,300	24,900
Medical Scientists	29,500	27,100	36,000	29,800	39,400	35,600	48,600	38,200							38,200	30,100
Biological Scientists	24,200	21,800	28,900	25,900	34,600	28,600	38,700	30,400	40,100	35,000	44,500	35,400	46,900		33,700	26,600
Psychologists	24,600	23,000	29,400	26,400	34,400	31,000	36,900	34,800	40,800		43,700				32,800	26,100
Social Scientists	24,700	23,200	29,500	26,900	35,600	31,300	37,200	35,300	39,700	34,500	44,500	35,300			32,000	26,000

NOTE: Median salaries were computed only for Ph.D.'s employed full-time, excluding those in the U.S. military. Academic salaries were multiplied by 11/9 to adjust for a full-year scale. Medians were not reported for cells with less than 20 cases reporting salary or with a sampling error of more than ± $2,000.

SOURCE: National Science Foundation, Characteristics of Doctoral Scientists and Engineers in the United States, 1981, NSF 82-332.

TABLE 42

MEDIAN ANNUAL SALARIES OF DOCTORAL SCIENTISTS AND ENGINEERS BY FIELD, SEX AND RACE, 1981

FIELD	Total	SEX		RACE				No Report
		Men	Women	White	Black	Am. Indian	Asian	
ALL FIELDS	$34,700	$35,600	$27,000	$34,900	$31,700	$35,500	$34,200	$35,900
PHYSICAL SCIENTISTS	36,200	36,500	29,400	36,400	31,700	30,800	34,100	39,000
Chemists	36,200	36,700	29,100	36,500	30,800	29,900	33,600	42,000
Physicists/Astronomers	36,100	36,200	31,200	36,100	37,700		35,300	
MATHEMATICAL SCIENTISTS	31,300	31,900	26,800	31,400	32,900		30,100	33,900
Mathematicians	30,900	31,300	26,700	31,000	32,400		30,300	29,700
Statisticians	34,600	35,800	27,000	34,600			29,900	
COMPUTER SPECIALISTS	34,400	34,700	28,700	34,300			34,500	
ENVIRONMENTAL SCIENTISTS	36,500	36,900	29,200	36,500			37,400	
Earth Scientists	37,000	37,400	30,000	36,800			39,200	
Oceanographers	32,100	33,500	28,700	32,600				
Atmospheric Scientists	36,300	36,800	28,000	36,700				
ENGINEERS	40,200	40,300	32,000	40,600	35,000	42,300	37,000	38,900
LIFE SCIENTISTS	33,200	34,300	27,100	33,300	31,300	34,800	31,500	34,200
Biological Scientists	31,600	32,700	26,300	31,700	29,900	35,700	30,700	29,900
Agricultural Scientists	33,600	33,800	26,200	33,900	29,500		28,200	
Medical Scientists	37,900	40,200	29,500	38,400	32,800		34,200	39,300
PSYCHOLOGISTS	30,700	32,400	26,200	30,700	30,600	33,100	29,600	32,500
SOCIAL SCIENTISTS	30,800	31,700	25,900	30,900	30,700	35,600	29,700	30,100
Economists	36,500	36,900	31,400	36,800			33,100	
Sociologists/Anthropologists	28,500	29,700	25,100	28,300	29,400		29,100	
Other Social Scientists	29,900	30,400	25,800	29,900	30,600		29,100	30,000

NOTE: All median salaries were computed only for full-time employed civilians.
No median was computed for groups with fewer than 20 individuals reporting salary.

SOURCE: National Science Foundation, Characteristics of Recent Science/Engineering Graduates: 1980, NSF 82-313.

TABLE 43

1980 MEDIAN ANNUAL SALARIES OF 1978-79 SCIENCE/ENGINEERING BACCALAUREATE GRADUATES* BY FIELD OF DEGREE, S/E EMPLOYMENT STATUS AND SEX

FIELD OF DEGREE	TOTAL EMPLOYED			SCIENCE/ENGINEERING EMPLOYED			NON-SCIENCE/ENGINEERING EMPLOYED		
	Total	Men	Women	Total	Men	Women	Total	Men	Women
TOTAL	$15,300	$17,500	$12,100	$18,300	$19,100	$13,800	$12,300	$14,100	$11,100
Physical Sciences	16,800	17,400	15,000	17,400	18,100	15,100	14,200	14,000	
Chemistry	16,400	17,100	14,900	16,500	17,300	14,700	16,000	15,800	
Physics/Astronomy	18,700	18,600		19,300	19,300				
Other Physical Sciences	15,100								
Math/Statistics	16,100	16,500	15,800	18,100	18,600	17,700	11,500	11,600	11,400
Computer Sciences	19,000	19,300	18,000	19,100	19,300	18,200			
Environmental Sciences	14,600	15,000	13,500	15,100	15,300	14,800	13,700	14,600	11,200
Engineering	21,000	20,900	21,260	20,900	20,900	21,200	22,500	22,600	
Life Sciences	12,200	13,000	11,400	12,200	12,700	11,700	12,200	13,600	10,900
Biology	12,000	12,800	11,500	12,300	12,800	12,000	11,800	12,700	10,900
Agricultural Sciences	12,500	13,200	11,000	12,100	12,500	11,000	13,300	14,000	10,900
Psychology	11,500	12,700	10,900	11,700	12,400	11,100	11,400	12,800	10,900
Social Sciences	12,900	14,400	11,500	13,700	14,600	12,600	12,600	14,400	11,200
Economics	14,800	15,300	13,000	16,000	16,700		14,200	15,200	12,100
Sociology/ Anthropology	12,200	14,100	11,000	12,600		11,200	12,000	14,200	11,000
Other Social Sciences	12,500	13,200	11,800	13,300	13,600		12,200	12,900	11,600

*Excludes individuals enrolled full-time in graduate school.

NOTES: Median annual salaries computed only for full-time employed civilians. Blanks indicate no median computed for groups with less than 15 respondents.

SOURCE: National Science Foundation, Characteristics of Recent Science/Engineering Graduates: 1980, NSF 82-313.

TABLE 44

1980 MEDIAN ANNUAL SALARIES OF 1978-79 SCIENCE/ENGINEERING MASTERS' DEGREE GRADUATES* BY FIELD OF STUDY, S/E EMPLOYMENT STATUS AND SEX

FIELD OF STUDY	TOTAL EMPLOYED			SCIENCE/ENGINEERING EMPLOYED			NON-SCIENCE/ENGINEERING EMPLOYED		
	Total	Men	Women	Total	Men	Women	Total	Men	Women
TOTAL	$20,900	$22,100	$16,500	$21,800	$22,700	$17,100	$16,700	$17,700	$13,500
Physical Sciences	20,100	20,500	18,500	20,600	21,100	18,900	14,100		
Chemistry	19,600	20,100	18,000	19,800	20,200				
Physics/Astronomy	22,600	22,700		23,000	23,200				
Other Physical Sciences									
Math/Statistics	19,100	20,400	16,600	20,700	21,400	17,300	14,700	15,100	
Computer Sciences	24,700	25,600	21,900	24,600	25,300	22,500			
Environmental Sciences	22,000	22,500	18,800	22,700	22,900	21,600	15,300	16,900	
Engineering	24,600	24,700	23,700	24,600	24,700	23,600	25,100	25,000	
Life Sciences	15,900	16,700	14,500	16,000	16,700	14,700	15,700	16,600	11,400
Biology	15,000	16,000	14,100	15,200	16,100	14,500	14,000	15,600	
Agricultural Sciences	17,100	17,100	16,700	17,000	17,100	16,600	17,200	17,100	
Psychology	15,600	16,200	15,100	15,400	15,500	15,300	16,700	17,400	14,100
Social Sciences	17,900	19,400	14,500	18,300	19,600	15,300	17,300	19,100	12,900
Economics	20,400	20,700		20,500	20,900		19,200		
Sociology/ Anthropology	15,500	17,400	13,400	16,200			12,500		9,600
Other Social Sciences	18,000	18,800	14,200				18,200	19,200	

* Excludes individuals enrolled full-time in graduate school.

NOTES: Median annual salaries computed only for full-time employed civilians. Blanks indicate no median computed for groups with less than 15 respondents.

SOURCE: National Science Foundation, Characteristics of Recent Science/Engineering Graduates: 1980, NSF 82-313.

TABLE 45

1980 MEDIAN ANNUAL SALARIES OF 1978-79 SCIENCE/ENGINEERING GRADUATES* BY FIELD OF EMPLOYMENT, DEGREE LEVEL AND SEX

FIELD OF EMPLOYMENT	TOTAL		MEN		WOMEN	
	B.S.	M.S.	B.S.	M.S.	B.S.	M.S.
TOTAL	$15,300	$20,900	$17,500	$22,100	$12,100	$16,500
Physical Sciences	15,500	19,900	16,900	20,300	13,800	18,000
Chemistry	15,000	19,700	15,900	20,200	13,800	17,900
Physics/Astronomy	19,800	21,200	19,900	21,400		
Other Physical Sciences	17,300		17,500			
Math/Statistics	17,500	19,000	17,900	20,700	14,000	14,200
Computer Sciences	18,400	23,400	18,900	23,600	17,300	22,200
Environmental Sciences	15,400	22,200	16,200	22,500	14,200	20,800
Engineering	20,800	24,600	20,800	24,700	20,600	23,000
Life Sciences	12,000	15,600	12,100	16,600	11,700	14,500
Biology	11,900	14,700	11,800	15,400	12,000	14,400
Agricultural Sciences	12,000	17,200	12,400	17,400	10,800	16,200
Psychology	10,700	15,700	11,200	15,600	10,100	15,900
Social Sciences	12,700	18,700	14,100	19,600	11,200	17,000
Economics	15,300	19,800	16,600	20,200		
Sociology/ Anthropology	11,100	16,300			10,700	
Other Social Sciences	12,400		12,900			

* Excludes individuals enrolled full-time in graduate school.

NOTES: Median annual salaries computed only for full-time employed civilians.
Blanks indicate no median computed for groups with less than 15 respondents.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Recent College Graduates Survey, 1981, unpublished tabulations (December 1982).

TABLE 46

NUMBER EMPLOYED AND AVERAGE ANNUAL SALARY OF 1979-80 BACHELOR'S DEGREE RECIPIENTS BY OCCUPATION, MAY 1981

OCCUPATION	Employed Full-Time	Avg. Annual Sal.* in Const. (1981) Dollars
TOTAL	632,500	$15,300
Business	151,600	16,400
Education†	88,800	11,200
Engineering	51,200	22,900
Health Professional	42,600	17,400
Public Affairs	28,100	11,800
Biological and Physical Sciences	9,600	15,400
Fine Arts	15,100	18,700
Social Sciences and Psychology	2,100	15,900
Research	10,500	13,400
Communications	8,300	13,000
Computer Science	21,400	19,800
Technician	25,000	14,700
Other Professional	10,900	14,500
Sales	58,400	16,300
Clerical and Secretarial	61,300	11,400
Crafts and Operatives	16,800	15,900
Other Nonprofessional	30,900	12,000

* Reported salaries of full-time workers under $4,200 were excluded from the tabulations.

† Most educators work 9 to 10 month contracts. Their salaries when adjusted for a 12-month period averaged $14,000 in May 1981 in constant (1981) dollars.

SOURCE: Battelle Columbus Laboratories, Report on 1982 National Survey of Compensation Paid Scientists and Engineers Engaged in Research and Development Activities, December 1982

TABLE 47

NUMBER AND MEAN MONTHLY SALARIES OF BACHELOR'S DEGREE NONSUPERVISORY SCIENTISTS AND ENGINEERS BY WORKING-AS-OCCUPATION AND SELECTED YEARS SINCE DEGREE, 1982

WORKING-AS-OCCUPATION	SELECTED YEARS SINCE FIRST DEGREE									
	2	4	7	10	13	15	20-21	24-25	30-31	Total*
Aeronautical & Astronautical Engineering	(335) $2,207	(921) $2,388	(49) $2,492	(65) $2,740	(48) $2,879	(69) $3,019	(174) $3,320	(160) $3,498	(143) $3,427	(3,141) $2,872
Chemical Engineering	(128) 2,259	(81) 2,335	(45) 2,513	(33) 2,788	(33) 2,900	(19) 2,995	(37) 3,327	(34) 3,406	(53) 3,381	(1,439) 2,729
Civil Engineering	(8) 1,863	(11) 2,064	(6) 2,483	(5) 2,660	(3) 2,900	(3) 3,333		(5) 3,060	(3) 3,300	(124) 2,559
Electrical & Electronic Engineering	(1,829) 2,256	(1,109) 2,453	(571) 2,658	(526) 2,862	(434) 3,024	(347) 3,164	(693) 3,370	(718) 3,499	(639) 3,485	(18,961) 2,796
Industrial Engineering	(13) 2,015	(12) 1,950	(14) 2,471	(4) 2,500	(7) 2,500	(5) 2,860	(11) 2,818	(8) 2,600	(8) 3,063	(226) 2,446
Materials Engineering	(20) 2,000	(19) 2,168	(10) 2,530	(15) 2,513	(6) 2,767	(10) 2,990	(16) 3,175	(22) 3,050	(38) 3,268	(494) 2,704
Mechanical Engineering	(194) 2,178	(152) 2,343	(50) 2,532	(70) 2,684	(37) 2,916	(48) 3,046	(95) 3,167	(111) 3,290	(138) 3,363	(2,639) 2,790
Metallurigical Engineering	(14) 1,986	(11) 1,709	(5) 2,300	(10) 2,270	(2) 2,450	(4) 2,625	(7) 2,986	(15) 3,233	(24) 3,271	(261) 2,661
Mining & Petroleum Engineering	(18) 2,222	(17) 2,394	(7) 2,586	(6) 2,550	(6) 2,750	(1) 3,200	(7) 3,229	(7) 3,500	(3) 3,033	(197) 2,715
Nuclear & Reactor Engineering	(107) 2,164	(77) 2,300	(34) 2,568	(41) 2,876	(19) 3,000	(24) 3,254	(36) 3,519	(32) 3,600	(52) 3,558	(1,206) 2,862
Ocean Science Engineering	(11) 2,082	(9) 2,278	(4) 2,450	(7) 2,671	(4) 2,725	(2) 2,550	(9) 3,144	(2) 3,200	(1) 3,300	(139) 2,660
Total Engineering	(2,725) 2,228	(1,610) 2,405	(811) 2,606	(799) 2,810	(605) 2,981	(539) 3,118	(1,101) 3,333	(1,143) 3,453	(1,127) 3,439	(29,326) 2,793
Agricultural & Biological Sciences	(62) 1,418	(54) 1,572	(55) 1,642	(26) 1,754	(13) 2,054	(13) 2,423	(23) 2,430	(16) 2,356	(20) 2,370	(819) 1,858
Atmospheric, Earth, Marine & Space Sciences	(13) 1,485	(15) 1,693	(11) 1,855	(6) 2,450	(8) 2,350	(3) 2,400	(4) 3,425	(5) 3,480	(5) 3,340	(201) 2,204
Chemistry	(151) 1,599	(120) 1,752	(97) 2,053	(57) 2,251	(50) 2,344	(28) 2,486	(73) 2,770	(73) 2,958	(77) 2,934	(2,243) 2,267
Computer Sciences	(228) 2,125	(169) 2,347	(100) 2,472	(71) 2,701	(56) 2,675	(43) 2,895	(40) 3,138	(32) 3,006	(18) 3,233	(2,200) 2,477
Mathematics & Statistics	(24) 1,975	(21) 2,176	(13) 2,446	(8) 2,800	(11) 2,964	(22) 2,886	(37) 3,224	(18) 3,278	(20) 3,155	(469) 2,770
Physics	(41) 1,949	(34) 1,853	(23) 2,196	(24) 2,567	(22) 2,859	(9) 2,944	(42) 3,271	(35) 3,429	(32) 3,472	(755) 2,794
Economics	(6) 1,783	(8) 1,863	(4) 1,950	(10) 2,380	(1) 1,300	(1) 3,200	(3) 2,967	(2) 3,000	(2) 2,200	(117) 2,154

* Total includes all years since first degree. NOTE: Numbers in parenthesis are survey respondents.

SOURCE: Battelle Columbus Laboratories, Report on 1982 National Survey of Compensation Paid Scientists and Engineers Engaged in Research and Development Activities, December 1982

TABLE 48

NUMBER AND MEAN MONTHLY SALARIES OF MASTER'S DEGREE NONSUPERVISORY SCIENTISTS AND ENGINEERS BY WORKING-AS-OCCUPATION AND SELECTED YEARS SINCE DEGREE, 1982

WORKING-AS-OCCUPATION	SELECTED YEARS SINCE FIRST DEGREE									
	2	4	7	10	13	15	20-21	24-25	30-31	Total*
Aeronautical & Astronautical Engineering	(12) $2,308	(22) $2,533	(28) $2,707	(32) $2,913	(25) $3,152	(38) $3,150	(78) $3,454	(64) $3,652	(68) $3,644	(1,136) $3,269
Chemical Engineering	(20) 2,370	(42) 2,643	(44) 2,505	(39) 2,833	(23) 2,991	(23) 3,500	(30) 3,297	(24) 3,642	(18) 3,583	(762) 3,014
Civil Engineering	(1) 2,300	(6) 2,317	(6) 2,417	(2) 2,500	(3) 3,200	(3) 2,933	(4) 3,750	(3) 3,333	(2) 3,900	(109) 2,863
Electrical & Electronic Engineering	(126) 2,385	(253) 2,573	(342) 2,768	(302) 2,992	(278) 3,245	(269) 3,322	(459) 3,574	(410) 3,690	(304) 3,663	(7,739) 3,250
Materials Engineering	(1) 2,400	(6) 2,433	(9) 2,433	(7) 2,600	(9) 2,633	(4) 3,025	(10) 3,210	(9) 2,978	(9) 3,500	(196) 2,948
Mechanical Engineering	(23) 2,313	(43) 2,351	(58) 2,616	(45) 2,960	(31) 3,065	(36) 3,208	(77) 3,543	(53) 3,572	(38) 3,629	(1,170) 3,074
Metallurgical Engineering	(2) 2,150	(9) 2,256	(16) 2,275	(7) 2,614	(4) 2,700	(1) 2,800	(8) 3,038	(2) 3,100	(9) 3,578	(177) 2,784
Nuclear & Reactor Engineering	(10) 2,360	(35) 2,309	(37) 2,500	(51) 2,796	(25) 3,060	(40) 3,253	(43) 3,495	(27) 3,589	(22) 3,855	(784) 3,090
Ocean Science Engineering	(1) 2,700	(2) 2,050	(4) 2,600	(9) 2,822	(5) 2,860	(8) 3,250	(7) 3,129	(3) 3,400	(4) 3,425	(114) 2,914
Total Engineering	(202) 2,372	(430) 2,503	(574) 2,678	(513) 2,914	(418) 3,172	(429) 3,283	(733) 3,520	(613) 3,645	(488) 3,656	(12,572) 3,180
Agricultural & Biological Sciences	(1) 1,700	(24) 1,704	(37) 1,951	(40) 2,080	(27) 2,211	(13) 2,215	(19) 2,600	(14) 2,979	(15) 2,727	(567) 2,180
Atmospheric, Earth, Marine & Space Sciences	(2) 2,000	(9) 2,011	(16) 2,225	(13) 2,377	(4) 2,450	(4) 3,100	(6) 2,900	(8) 3,200	(1) 2,400	(161) 2,529
Chemistry	(6) 1,950	(26) 1,969	(51) 2,104	(34) 2,247	(39) 2,479	(28) 2,582	(33) 3,009	(25) 3,060	(41) 3,310	(875) 2,603
Computer Sciences	(8) 2,438	(33) 2,336	(53) 2,581	(40) 2,718	(36) 3,008	(37) 2,959	(40) 3,270	(30) 3,440	(20) 3,550	(837) 2,903
Economics	(3) 1,900	(8) 2,225	(11) 2,173	(10) 2,370	(10) 2,550	(5) 3,400	(4) 3,025	(6) 3,283	(1) 4,000	(163) 2,582
Mathematics & Statistics	(2) 2,300	(17) 2,106	(13) 2,608	(22) 2,586	(10) 2,800	(6) 3,000	(21) 3,067	(18) 3,506	(14) 3,636	(387) 2,956
Physics	(3) 2,233	(22) 2,241	(23) 2,270	(17) 2,524	(22) 2,750	(29) 3,038	(37) 3,438	(25) 3,448	(23) 3,600	(570) 3,070

* Total includes all years since first degree. NOTE: Numbers in parenthesis are survey respondents.

SOURCE: Battelle Columbus Laboratories, Report on 1982 National Survey of Compensation Paid Scientists and Engineers Engaged in Research and Development Activities, December 1982.

TABLE 49

NUMBER AND MEAN MONTHLY SALARIES OF DOCTORATE DEGREE NONSUPERVISORY SCIENTISTS AND ENGINEERS BY WORKING-AS-OCCUPATION AND SELECTED YEARS SINCE DEGREE, 1982

WORKING-AS-OCCUPATION	SELECTED YEARS SINCE FIRST DEGREE									
	5	7	10	13	15	18-19	22-23	26-27	30-31	Total*
Aeronautical & Astronautical Engineering	$	(7) $2,743	(15) $3,100	(15) $3,173	(18) $3,260	(38) $3,663	(19) $3,668	(22) $3,950	(12) $3,833	(345) $3,556
Chemical Engineering	(7) 2,914	(10) 2,980	(25) 3,140	(24) 3,300	(21) 3,276	(36) 3,844	(39) 4,064	(15) 4,147	(19) 4,326	(502) 3,612
Electrical & Electronic Engineering	(6) 2,817	(22) 3,045	(67) 3,191	(91) 3,418	(86) 3,524	(176) 3,771	(124) 3,891	(68) 3,932	(52) 4,288	(1,733) 3,675
Materials Engineering	(1) 1,400	(5) 2,580	(12) 2,683	(15) 2,833	(12) 2,883	(12) 3,467	(13) 3,700	(5) 3,420	(2) 4,450	(207) 3,282
Mechanical Engineering	(3) 2,767	(9) 2,789	(16) 3,131	(14) 3,057	(31) 3,326	(48) 3,648	(29) 3,679	(27) 3,804	(8) 4,050	(445) 3,484
Metallurigical Engineering	(2) 2,750	(10) 2,780	(9) 2,933	(7) 2,843	(9) 3,322	(16) 3,856	(12) 3,708	(8) 4,425	(4) 4,250	(187) 3,485
Nuclear & Reactor Engineering		(7) 2,814	(14) 2,836	(20) 3,350	(14) 3,200	(43) 3,753	(28) 3,664	(20) 3,840	(13) 3,900	(368) 3,535
Total Engineering	(21) 2,752	(84) 2,837	(168) 3,063	(200) 3,266	(205) 3,389	(417) 3,705	(301) 3,822	(176) 3,935	(121) 4,139	(4,171) 3,577
Agricultural & Biological Sciences	(4) 2,425	(43) 2,374	(64) 2,408	(42) 2,586	(47) 2,849	(87) 2,832	(55) 3,204	(43) 3,188	(34) 3,126	(1,032) 2,804
Atmospheric, Earth, Marine & Space Sciences	(1) 2,000	(4) 2,375	(5) 2,500	(12) 2,775	(11) 2,945	(25) 3,232	(15) 3,520	(6) 3,617	(6) 3,883	(193) 3,108
Chemistry	(33) 2,303	(72) 2,572	(75) 2,581	(82) 2,945	(55) 3,040	(118) 3,224	(72) 3,507	(62) 3,815	(77) 3,961	(1,676) 3,177
Computer Sciences		(8) 3,000	(12) 3,408	(16) 3,150	(20) 3,340	(22) 3,395	(8) 3,988	(7) 3,757	(4) 3,725	(248) 3,392
Economics	(2) 2,450	(4) 2,525	(11) 2,782	(12) 2,808	(6) 3,233	(12) 3,408	(1) 3,800	(5) 3,860	(6) 3,533	(159) 3,257
Mathematics & Statistics	(1) 2,100	(9) 2,656	(19) 2,832	(22) 3,009	(19) 2,811	(38) 3,397	(25) 3,808	(18) 3,800	(8) 3,738	(392) 3,278
Physics	(5) 2,080	(26) 2,504	(43) 2,665	(53) 2,887	(67) 3,016	(109) 3,450	(98) 3,559	(56) 3,702	(42) 4,040	(1,220) 3,334
Psychology	(3) 2,167	(2) 2,450	(15) 2,500	(19) 2,611	(14) 2,943	(13) 3,054	(7) 3,329	(6) 3,433	(7) 3,514	(178) 2,907

* Total includes all years since first degree. NOTE: Numbers in parenthesis are survey respondents.

SOURCE: Battelle Columbus Laboratories, Report on 1982 National Survey of Compensation Paid Scientists and Engineers Engaged in Research and Development Activities, December 1982.

TABLE 50

NUMBER AND MEAN MONTHLY SALARIES OF NONSUPERVISORY SCIENTISTS AND ENGINEERS BY DEGREE LEVEL, TYPE OF ESTABLISHMENT, AND SELECTED YEARS SINCE FIRST DEGREE, 1982

TYPE OF ESTABLISHMENT & DEGREE LEVEL	SELECTED YEARS SINCE FIRST DEGREE									
	2	4	7	10	13	15	20–21	24–25	30–31	Total*
BACHELOR'S DEGREE										
Nonprofit Research Institutes	(160) $1,726	(139) $1,938	(93) $1,972	(64) $2,381	(57) $2,482	(37) $2,711	(68) $2,826	(53) $2,964	(45) $2,813	(2,034) $2,294
Educational Institutions	(115) 1,360	(85) 1,372	(37) 1,522	(26) 1,973	(23) 2,204	(14) 1,907	(15) 2,400	(14) 2,707	(11) 2,800	(1,059) 1,738
Contract Research Centers	(199) 2,158	(177) 2,303	(85) 2,487	(99) 2,740	(86) 2,981	(72) 3,129	(173) 3,381	(170) 3,509	(191) 3,537	(3,650) 2,964
Federal Establishments	(69) 1,904	(60) 2,225	(53) 2,355	(51) 2,506	(38) 2,689	(54) 2,935	(166) 3,270	(147) 3,430	(76) 3,367	(2,021) 2,904
Total Industry	(2,877) 2,223	(1,682) 2,393	(907) 2,559	(840) 2,778	(662) 2,946	(561) 3,079	(1,034) 3,290	(1,086) 3,396	(1,091) 3,393	(30,188) 2,738
MASTER'S DEGREE										
Nonprofit Research Institutes	(12) 2,100	(53) 2,158	(61) 2,316	(74) 2,482	(45) 2,660	(49) 2,822	(73) 3,110	(59) 3,278	(36) 3,333	(1,356) 2,746
Educational Institutions	(3) 1,633	(48) 1,633	(68) 1,306	(46) 1,846	(37) 2,146	(34) 2,141	(19) 2,426	(31) 2,532	(17) 2,735	(910) 2,037
Contract Research Centers	(43) 2,384	(99) 2,399	(125) 2,566	(149) 2,792	(109) 2,999	(103) 3,241	(203) 3,477	(169) 3,614	(151) 3,758	(3,410) 3,186
Federal Establishments	(2) 1,650	(14) 2,029	(15) 2,453	(28) 2,457	(27) 2,715	(19) 2,858	(41) 3,293	(23) 3,343	(17) 3,371	(546) 2,864
Total Industry	(183) 2,377	(404) 2,512	(577) 2,688	(489) 2,904	(436) 3,108	(428) 3,230	(659) 3,505	(563) 3,641	(459) 3,597	(11,872) 3,146
DOCTORATE DEGREE										
Nonprofit Research Institutes		(3) 1,667	(31) 2,445	(57) 2,554	(67) 2,852	(52) 2,963	(72) 3,188	(41) 3,605	(26) 3,762	(1,078) 3,125
Educational Institutions		(9) 1,578	(65) 2,032	(89) 2,098	(89) 2,502	(105) 2,567	(127) 2,905	(87) 3,133	(71) 3,369	(1,983) 2,714
Contract Research Centers		(1) 2,400	(57) 2,858	(115) 2,884	(140) 3,051	(150) 3,283	(274) 3,631	(144) 3,848	(104) 3,809	(3,088) 3,446
Federal Establishments	(1) 2,400	(1) 2,000	(4) 2,575	(18) 2,472	(29) 2,590	(23) 2,822	(34) 3,326	(21) 3,724	(9) 3,544	(409) 3,103
Total Industry		(12) 3,050	(145) 2,866	(217) 3,086	(230) 3,291	(225) 3,482	(342) 3,847	(234) 3,921	(166) 4,167	(4,778) 3,573

* Total includes all years since first degree. NOTE: Numbers in parenthesis are survey respondents.

SOURCE: Battelle Columbus Laboratories, Report on 1982 National Survey of Compensation Paid Scientists and Engineers Engaged in Research and Development Activities, December 1982.

TABLE 51

NUMBER AND MEAN MONTHLY SALARIES OF NONSUPERVISORY SCIENTISTS AND ENGINEERS BY HIGHEST DEGREE FIELD AND SELECTED YEARS SINCE DEGREE, 1982

HIGHEST DEGREE FIELD	SELECTED YEARS SINCE FIRST DEGREE									
	2	4	7	10	13	15	20-21	24-25	30-31	Total*
BACHELOR'S DEGREE										
Engineering	(2,585) $2,244	(1,490) $2,429	(706) $2,632	(722) $2,842	(560) $3,001	(493) $3,153	(993) $3,357	(1,095) $3,463	(1,014) $3,462	(27,217) $2,807
Chemistry	(164) 1,637	(146) 1,838	(93) 2,165	(60) 2,307	(63) 2,484	(40) 2,620	(96) 2,802	(95) 2,952	(125) 2,995	(2,658) 2,373
Physics	(89) 2,024	(84) 2,101	(55) 2,375	(47) 2,689	(51) 2,941	(46) 2,974	(100) 3,329	(83) 3,430	(92) 3,535	(1,789) 2,880
Other Physical Sciences	(37) 1,857	(35) 1,903	(23) 2,278	(14) 2,600	(12) 2,500	(11) 2,782	(28) 3,239	(29) 3,317	(23) 3,217	(620) 2,611
Life Sciences	(89) 1,543	(83) 1,719	(88) 1,758	(46) 1,937	(20) 2,095	(18) 2,261	(34) 2,638	(18) 2,678	(33) 2,733	(1,243) 1,999
Social Sciences	(24) 1,629	(26) 1,927	(15) 2,247	(22) 2,500	(13) 2,177	(12) 2,800	(8) 2,750	(7) 3,186	(10) 2,740	(395) 2,278
Mathematics & Statistics	(242) 2,087	(114) 2,311	(82) 2,522	(65) 2,652	(62) 2,782	(71) 2,927	(115) 3,175	(65) 3,237	(44) 3,400	(2,332) 2,615
MASTER'S DEGREE										
Engineering	(194) 2,385	(407) 2,515	(521) 2,682	(445) 2,938	(370) 3,198	(367) 3,311	(628) 3,561	(547) 3,655	(421) 3,694	(11,119) 3,193
Chemistry	(5) 1,940	(21) 1,881	(41) 2,122	(41) 2,263	(39) 2,503	(36) 2,669	(41) 2,971	(32) 3,128	(49) 3,300	(957) 2,666
Physics	(6) 2,150	(29) 2,300	(40) 2,425	(47) 2,734	(48) 2,840	(51) 2,969	(81) 3,322	(53) 3,475	(65) 3,485	(1,213) 3,091
Other Physical Sciences	(1) 2,300	(22) 2,209	(30) 2,363	(27) 2,467	(12) 2,708	(16) 3,081	(23) 3,06.	(18) 3,256	(17) 3,465	(439) 2,810
Life Sciences	(3) 1,733	(28) 1,764	(61) 2,087	(57) 2,116	(40) 2,353	(18) 2,383	(31) 2,755	(21) 3,114	(20) 3,000	(789) 2,299
Social Science	(4) 1,750	(13) 2,008	(16) 2,163	(20) 2,530	(5) 2,960	(11) 2,945	(9) 2,622	(9) 2,833	(7) 3,243	(294) 2,486
Mathematics & Statistics	(4) 2,250	(42) 2,276	(41) 2,659	(47) 2,772	(43) 2,940	(37) 3,068	(81) 3,357	(56) 3,521	(37) 3,641	(1,085) 3,036
DOCTORATE DEGREE										
Engineering		(9) 3,000	(74) 2,907	(134) 3,067	(153) 3,316	(162) 3,432	(307) 3,827	(188) 3,929	(87) 4,184	(3,537) 3,603
Chemistry		(5) 2,120	(69) 2,590	(91) 2,633	(98) 2,922	(76) 3,146	(132) 3,387	(84) 3,810	(95) 3,945	(2,081) 3,266
Physics	(1) 2,400	(3) 2,233	(31) 2,552	(64) 2,825	(97) 3,022	(108) 3,113	(158) 3,593	(101) 3,754	(72) 4,035	(1,954) 3,397
Other Physical Sciences		(1) 3,100	(19) 2,589	(13) 2,723	(34) 2,912	(30) 3,280	(36) 3,581	(25) 3,656	(16) 4,038	(542) 3,325
Life Sciences			(51) 2,382	(67) 2,488	(46) 2,617	(62) 2,844	(62) 2,960	(43) 3,233	(39) 3,156	(1,184) 2,848
Social Sciences			(5) 2,620	(34) 2,553	(40) 2,680	(28) 2,932	(25) 3,092	(18) 3,411	(15) 3,593	(447) 3,023
Mathematics & Statistics			(8) 2,625	(28) 2,911	(29) 3,093	(30) 3,047	(44) 3,461	(19) 3,747	(18) 3,561	(544) 3,303

* Total includes all years since first degree. NOTE: Numbers in parenthesis are survey respondents.

SOURCE: Battelle Columbus Laboratories, Report on 1982 National Survey of Compensation Paid Scientists and Engineers Engaged in Research and Development Activities, December 1982.

TABLE 52

NUMBER AND MEAN MONTHLY SALARIES OF BACHELOR'S AND MASTER'S DEGREE NONSUPERVISORY PROFESSIONALS BY WORKING-AS-OCCUPATION AND SELECTED YEARS SINCE DEGREE, 1982

WORKING-AS-OCCUPATION	SELECTED YEARS SINCE FIRST DEGREE									
	2	4	7	10	13	15	20-21	24-25	30-31	Total†
BIOLOGICAL AND BIOMEDICAL SCI.*										
Bachelor's Degree	(22) $1,377	(23) $1,565	(23) $1,757	(12) $2,008	(7) $2,286	(7) $2,886	(13) $2,700	(9) $2,767	(8) $2,525	(382) $2,021
Master's Degree	(1) 1,700	(11) 1,918	(20) 1,865	(18) 2,017	(16) 2,281	(5) 2,480	(8) 2,663	(10) 3,060	(7) 3,414	(285) 2,272
BIOLOGICAL AND BIOMEDICAL SCI.**										
Bachelor's Degree	(28) 1,364	(22) 1,568	(30) 1,537	(10) 1,550	(5) 1,700	(4) 1,875	(9) 1,922	(6) 1,850	(5) 1,780	(338) 1,649
Master's Degree		(4) 1,500	(9) 1,889	(15) 2,227	(6) 2,133	(6) 1,967	(4) 2,100	(1) 2,400	(4) 1,900	(155) 1,995
ENGINEERING*										
Bachelor's Degree	(2,337) 2,235	(1,420) 2,418	(747) 2,619	(756) 2,823	(576) 2,989	(523) 3,135	(1,074) 3,343	(1,124) 3,464	(1,114) 3,446	(27,089) 2,832
Master's Degree	(172) 2,377	(384) 2,509	(532) 2,685	(477) 2,934	(398) 3,187	(413) 3,295	(709) 3,535	(602) 3,662	(484) 3,662	(11,923) 3,207
ENGINEERING**										
Bachelor's Degree	(388) 2,182	(189) 2,309	(64) 2,456	(43) 2,567	(29) 2,817	(16) 2,550	(27) 2,904	(19) 2,779	(12) 2,858	(22,331) 2,318
Master's Degree	(30) 2,340	(46) 2,459	(42) 2,588	(36) 2,642	(20) 2,880	(16) 2,975	(24) 3,083	(11) 2,700	(4) 2,875	(648) 2,679
CHEMISTRY*										
Bachelor's Degree	(95) 1,601	(67) 1,752	(67) 2,104	(49) 2,312	(38) 2,429	(23) 2,600	(62) 2,900	(65) 3,025	(74) 2,972	(1,666) 2,401
CHEMISTRY**										
Bachelor's Degree	(56) 1,596	(53) 1,751	(30) 1,937	(8) 1,875	(12) 2,075	(5) 1,960	(11) 2,036	(8) 2,413	(3) 2,000	(577) 1,878
MATH & STATISTICS*										
Bachelor's Degree	(14) 2,021	(10) 2,290	(8) 2,325	(6) 2,800	(8) 3,088	(21) 2,919	(28) 3,196	(14) 3,564	(19) 3,216	(340) 2,952
MATH & STATISTICS**										
Bachelor's Degree	(10) 1,910	(11) 2,073	(5) 2,640	(2) 2,800	(3) 2,633	(1) 2,200	(9) 3,311	(4) 2,275	(1) 2,000	(129) 2,289

* Males only. ** Females only. † Total includes all years since first degree.

SOURCE: Battelle Columbus Laboratories, Report on 1982 National Survey of Compensation Paid Scientists and Engineers Engaged in Research and Development Activities, December 1982.

TABLE 53

NUMBER AND MEAN MONTHLY SALARIES OF NONSUPERVISORY PROFESSIONALS BY TYPE OF DEGREE AND SELECTED YEARS SINCE DEGREE, 1982

DEGREE	SELECTED YEARS SINCE FIRST DEGREE									
	2	4	7	10	13	15	20-21	24-25	30-31	Total*
Doctor of Veterinary Med.	(1) $1,300	$	(1) $2,900	(1) $3,900	(4) $3,400	$	(2) $4,000	(2) $4,050	(2) $3,800	(51) $3,231
Doctor of Dental Surgery		(2) 2,050	(1) 2,100	(6) 2,800	(3) 3,500		(2) 3,200	(2) 3,150		(45) 2,807
Medical Doctor	(2) 1,500	(10) 2,380	(16) 2,338	(7) 2,529	(10) 2,820	(6) 2,850	(4) 4,125	(8) 4,038	(5) 3,300	(177) 2,888

* Total includes all years since first degree. NOTE: Numbers in parenthesis are survey respondents.

SOURCE: Industrial Research & Development Magazine, March 1983.

Chart 3. SALARIES OF SCIENTISTS AND ENGINEERS EMPLOYED IN RESEARCH AND DEVELOPMENT, 1981 - 1983

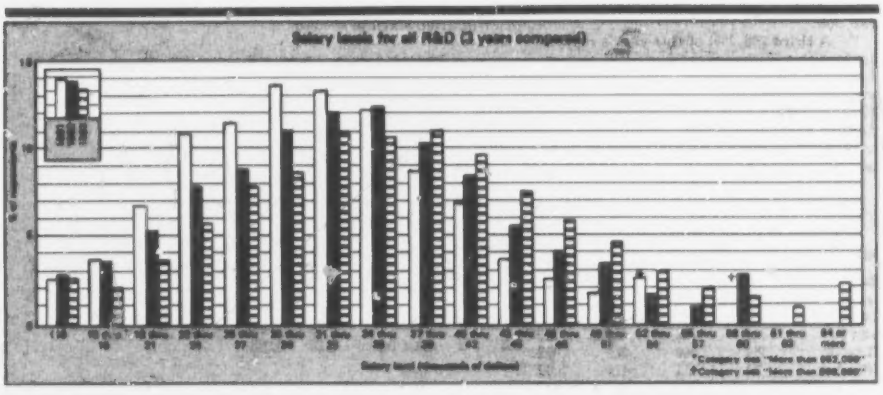
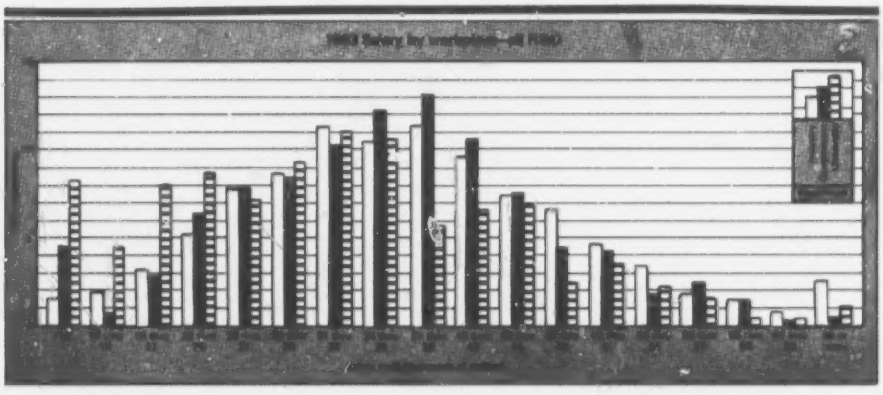


Chart 4. SALARIES OF SCIENTISTS AND ENGINEERS EMPLOYED IN RESEARCH AND DEVELOPMENT BY TYPE OF EMPLOYER, 1983



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SOURCE: Industrial Research & Development Magazine, March 1983.

TABLE 54

SALARIES OF SCIENTISTS AND ENGINEERS EMPLOYED IN RESEARCH AND DEVELOPMENT BY PROFESSION, 1982 and 1983

PROFESSION	Median Salary		% Increase
	1982	1983	
Mathematician	$36,950	$38,450	4.1%
Aeronautical Engineer	38,240	41,150	7.6
Chemical Engineer	35,340	38,890	10.1
Physicist	37,070	38,500	3.8
Electrical Engineer	35,250	37,480	6.3
Metallurgist	37,670	38,333	1.8
Mechanical Engineer	34,990	38,100	8.9
Chemist	32,190	34,880	8.4
Biologist	30,950	34,380	11.1
Industrial Engineer	29,950	30,520	1.9
Ceramist	35,950	38,400	6.8
Geologist	33,950	36,950	8.9
Other Professionals	30,670	32,450	5.8

TABLE 55

SALARIES OF SCIENTISTS AND ENGINEERS EMPLOYED IN RESEARCH AND DEVELOPMENT BY DEGREE LEVEL, 1982 and 1983

DEGREE	MEDIAN SALARY		% Increase	Annual Difference		Difference Increase %*
	1982	1983		1982	1983	
Doctorate	$38,520	$40,590	5.4	$4,510	$4,310	-4.4
Master's	34,010	36,280	6.7	2,750	3,100	12.7
Bachelor's	31,260	33,180	6.1	6,490	5,100	-21.4
Less than Bachelor's	24,770	27,670	11.7			

*Difference above next-lower degree.

SOURCE: U. S. Department of Labor, Bureau of Labor Statistics, USDL-83-289 Press Release dated July 7, 1983.

TABLE 56

NUMBER AND AVERAGE SALARIES FOR SELECTED PROFESSIONAL, ADMINISTRATIVE, TECHNICAL AND CLERICAL OCCUPATIONS IN PRIVATE INDUSTRY, March 1983

OCCUPATION AND CLASS	Number of Employees*	Average Salaries†	
		Monthly	Annual
Accountants II	24,627	$1,939	$23,264
Accountants III	38,490	2,279	27,346
Accountants IV	22,037	2,854	34,244
Chief Accountants II	1,195	3,472	41,664
Chief Accountants III	741	4,441	53,286
Chemists I	2,653	1,780	21,365
Chemists II	5,255	2,028	24,341
Chemists III	9,197	2,451	29,413
Chemists IV	9,413	2,953	35,439
Chemists V	6,850	3,574	42,892
Chemists VI	2,312	4,252	51,028
Chemists VII	779	5,039	60,471
Engineers I	32,588	2,130	25,556
Engineers II	64,490	2,314	27,769
Engineers III	131,048	2,609	31,307
Engineers IV	138,684	3,061	36,726
Engineers V	99,584	3,643	43,720
Engineers VI	46,426	4,288	51,460
Engineers VII	12,383	4,847	58,167
Engineers VIII	3,125	5,578	66,938
Engineering Technicians I	4,996	1,304	15,646
Engineering Technicians II	18,416	1,506	18,077
Engineering Technicians III	31,731	1,788	21,460
Engineering Technicians IV	35,260	2,088	25,061
Engineering Technicians V	20,491	2,360	28,320
Attorneys II	2,905	2,875	34,502
Attorneys III	3,518	3,523	42,271
Attorneys IV	3,342	4,432	53,184
Clerk, Accounting II	87,578	1,122	13,466
Clerk, Accounting III	59,324	1,339	16,073
Secretaries II	61,183	1,336	16,031
Secretaries III	102,687	1,521	18,254
Drafters II	11,234	1,302	15,629
Drafters III	22,217	1,533	18,401
Drafters IV	24,714	1,871	22,454
Computer Operators I	6,003	1,040	12,481
Computer Operators II	17,903	1,221	14,648
Computer Operators III	29,576	1,416	16,988
Computer Operators IV	15,171	1,727	20,727
Programmers/Programmer Analysts I	14,660	1,648	19,777
Programmers/Programmer Analysts II	35,263	1,846	22,148
Programmers/Programmer Analysts III	51,033	2,185	26,224
Programmers/Programmer Analysts IV	29,142	2,620	31,446
Programmers/Programmer Analysts V	9,654	3,177	38,125

*Occupational Employment estimates relate to the total in all establishments within scope of the survey and not the number actually surveyed.

†Preliminary.

SOURCE: U.S. Department of Labor, National Survey of Professional, Administrative, Technical and Clerical Pay, March 1982.

TABLE 57

NUMBER AND AVERAGE SALARIES FOR SELECTED PROFESSIONAL, ADMINISTRATIVE, TECHNICAL AND CLERICAL OCCUPATIONS IN PRIVATE INDUSTRY, March 1982

OCCUPATION AND CLASS	No. of Employees	Monthly Salaries		Annual Salaries	
		Mean	Median	Mean	Median
Accountants II	23,570	$1,839	$1,799	$22,068	$21,591
Accountants III	35,575	2,139	2,100	25,673	25,200
Accountants IV	21,187	2,638	2,600	31,658	31,200
Chief Accountants II	958	3,309	3,332	39,708	39,984
Chief Accountants III	672	4,201	4,157	50,414	49,883
Chemists I	3,617	1,637	1,625	19,640	19,497
Chemists II	6,677	1,956	1,916	23,474	22,991
Chemists III	10,900	2,335	2,295	28,016	27,540
Chemists IV	11,028	2,837	2,791	34,047	33,487
Chemists V	8,912	3,351	3,307	40,207	39,684
Chemists VI	3,826	3,914	3,823	46,971	45,882
Chemists VII	1,438	4,471	4,365	53,658	52,379
Engineers I	31,293	1,969	1,965	23,622	23,580
Engineers II	60,083	2,172	2,166	26,060	25,990
Engineers III	116,212	2,444	2,420	29,331	29,040
Engineers IV	138,972	2,870	2,860	34,443	34,323
Engineers V	101,701	3,390	3,380	40,677	40,557
Engineers VI	45,953	3,953	3,900	47,442	46,800
Engineers VII	14,102	4,528	4,457	54,338	53,479
Engineers VIII	2,874	5,208	5,033	62,494	60,991
Engineering Technicians I	7,178	1,224	1,183	14,688	14,194
Engineering Technicians II	20,271	1,437	1,408	17,246	16,893
Engineering Technicians III	31,340	1,685	1,638	20,219	19,654
Engineering Technicians IV	36,630	1,968	1,939	23,620	23,271
Engineering Technicians V	21,651	2,230	2,216	26,761	26,592
Attorneys II	3,008	2,641	2,535	31,696	30,418
Attorneys III	3,622	3,304	3,267	39,649	39,200
Attorneys IV	2,919	4,152	4,042	49,818	48,504
Clerks Accounting II	85,417	1,041	1,000	12,488	11,995
Clerks Accounting III	58,670	1,226	1,183	14,713	14,190
Secretaries II	63,060	1,245	1,213	14,939	14,559
Secretaries III	106,688	1,421	1,374	17,051	16,493
Drafters I	3,161	978	962	11,739	11,539
Drafters II	11,929	1,188	1,162	14,257	13,944
Drafters III	23,277	1,420	1,378	17,046	16,536
Drafters IV	26,149	1,747	1,708	20,964	20,492
Drafters V	20,762	2,159	2,122	25,909	25,464
Computer Operators I	6,141	991	954	11,896	11,444
Computer Operators II	14,928	1,158	1,095	13,895	13,140
Computer Operators III	29,523	1,317	1,283	15,804	15,391
Computer Operators IV	16,252	1,610	1,559	19,325	18,708
Computer Operators V	3,212	1,907	1,838	22,889	22,051
Computer Operators VI	360	1,939	1,920	23,267	23,040
Programmers/Programmer Analysts I	13,043	1,462	*	17,535	*
Programmers/Programmer Analysts II	30,366	1,719	*	20,629	*
Programmers/Programmer Analysts III	45,970	2,099	*	25,192	*
Programmers/Programmer Analysts IV	26,360	2,447	*	29,365	*
Programmers/Programmer Analysts V	7,950	2,952	*	35,430	*

* Because the programmer job was newly added to the 1982 survey, not all large employers of these workers were able to provide individual earnings information on short notice. Thus, salary distributions and measures of central tendency, e.g. medicine, were not computed for programmers.

SOURCE: D. Dietrich Associates, Inc., Scientific Salaries Survey 1982, June 1982.

TABLE 58

NUMBER, AVERAGE AND MEDIAN SALARIES OF SCIENTISTS BY TITLE*, MAY 1982

TITLE*	Number of Employees	Weighted Average Base	Firm's Actual Median Salary
Scientist I	492	$19,824	$18,700
Scientist II	1,016	22,199	22,300
Scientist III	1,229	27,258	26,600
Scientist IV	934	32,999	30,900
Scientist V	846	37,668	35,400
Scientist VI	672	43,609	41,000
Scientist VII	345	49,616	47,400
Scientist, Dept. Head	159	54,705	53,200

TABLE 59

NUMBER AND WEIGHTED AVERAGE SALARIES OF SCIENTISTS BY TITLE* AND TYPE OF EMPLOYER, 1982

TITLE*	Consulting Firms		Industry		Research & Development		Government		Utilities		All Firms
	Number	Average Salary	Number	Average Salary	Number	Average Salary	Number	Average Salary	Number	Average Salary	Average Salary
Scientist I	96	$17,942	156	$19,263	142	$20,234	21	$22,898	77	$21,712	$19,824
Scientist II	240	20,512	212	23,023	396	21,974	15	22,285	147	24,368	22,199
Scientist III	263	24,059	175	27,537	542	28,078	25	29,148	224	28,606	27,258
Scientist IV	134	28,845	157	31,267	471	34,289	5	27,676	167	34,518	32,999
Scientist V	236	36,891	145	35,038	403	38,807	17	35,163	45	40,963	37,668
Scientist VI	107	43,625	115	40,669	406	44,771	10	38,212	34	41,262	43,609
Scientist VII	55	45,472	37	49,480	236	50,918	4	47,217	13	44,637	49,616
Scientist, Dept. Head	42	50,636	37	52,295	61	60,098	6	47,721	13	52,623	54,705
TOTALS	1,173	29,701	1,034	30,112	2,657	34,791	103	30,459	720	30,458	32,264

* See original survey for definition of Title by level of responsibility.

SOURCE: D. Dietrich Associates, Inc., Scientific Salaries Survey 1982, June 1982.

TABLE 60

NUMBER AND AVERAGE SALARY OF SCIENTISTS BY TITLE* AND DISCIPLINE, 1982

DISCIPLINE	TITLE*							
	Scientist I	Scientist II	Scientist III	Scientist IV	Scientist V	Scientist VI	Scientist VII	Scientist Dept. Head
Atmospheric Science	(10) $17,383	(4) $21,913	(10) $26,114	(5) $33,110	$	(3) $40,543	(1) $3€,989	(5) $54,000
Biology	(41) 22,982	(95) 20,081	(97) 24,923	(63) 31,220	(41) 34,086	(19) 46,188	(10) 40,730	(14) 46,577
Biochemistry	(3) 19,621	(12) 20,031	(8) 22,044	(13) 26,861	(5) 32,008	(10) 34,634		(6) 41,918
Botany	(3) 16,602		(4) 25,819	(3) 30,144	(7) 36,009			
Chemistry	(173) 19,193	(231) 22,382	(251) 27,377	(170) 33,722	(176) 36,747	(132) 41,832	(63) 48,087	(45) 53,134
Computer Science	(49) 21,587	(112) 23,625	(158) 28,564	(48) 34,040	(49) 40,655	(5) 47,402	(8) 47,954	(8) 52,797
Economics	(8) 16,157	(33) 21,640	(47) 27,702	(43) 34,490	(13) 40,141	(21) 42,759	(3) 52,800	(3) 57,407
Environmental Sci.	(24) 17,989	(99) 21,520	(107) 26,336	(52) 33,138	(54) 38,683	(29) 43,810	(16) 44,292	(10) 44,182
Geology	(10) 20,396	(86) 21,867	(83) 25,793	(33) 30,882	(111) 38,181	(31) 47,190	(16) 50,380	(10) 58,568
Mathematics	(7) 17130	(16) 23,859	(22) 28,994	(19) 32,901	(6) 42,485	(20) 43,554	(5) 57,905	
Metallurgy	(5) 24,350	(22) 24,954	(41) 30,770	(33) 36,428		(16) 41,478		
Microbiology	(6) 18,156	(11) 20,096	(8) 25,000	(11) 27,089	(9) 31,900		(7) 40,600	(4) 44,046
Pathology					(6) 44,870			
Oceanography	(3) 21,550	(1) 24,492						(2) 49,492
Pharmacology		(5) 18,365	(3) 25,596	(5) 28,620				
Physics	(14) 23,011	(15) 25,684	(45) 25,062	(49) 36,612	(70) 36,700	(51) 48,388	(8) 53,100	(12) 58,262
Physiology								(2) 48,286
Planner	(6) 20,202	(18) 22,857	(29) 29,585	(25) 35,368	(10) 39,638	(1) 26,000	(5) 43,622	(4) 50,919
Soils Science		(4) 23,423	(7) 27,283	(5) 34,422		(3) 42,308		
Zoology			(6) 21,521					
Toxicology				(7) 30,868				

* See Original Survey for definition of Title by level of responsibility.

NOTE: Number in parentheses indicates number of employee respondents.

SOURCE: Chemical and Engineering News, Vol. 61, Number 27, July 4, 1983, p. 33; American Chemical Society, Salaries 1983 - An Analysis of the American Chemical Society's 1983 Survey of Salaries and Employment, June 1983.

TABLE 61

MEDIAN ANNUAL SALARIES FOR CHEMISTS* AND CHEMICAL ENGINEERS* OF ALL EXPERIENCE LEVELS BY DEGREE, 1973-1983

YEAR	CHEMISTS			CHEMICAL ENGINEERS		
	B.S.	M.S.	Ph.D.	B.S.	M.S.	Ph.D
1973	$16,800	$17,500	$20,500	$20,200	$22,000	$23,100
1974	17,500	18,400	21,700	21,300	22,400	24,800
1975	19,000	19,800	23,000	24,000	25,000	26,000
1976	19,800	20,500	24,700	26,000	27,000	29,000
1977	21,000	22,000	26,000	28,000	30,000	30,000
1978	22,000	24,000	27,400	30,000	32,000	32,000
1979	23,500	25,000	29,000	31,700	31,500	35,000
1980	25,000	26,000	31,200	35,000	35,000	38,000
1981	27,500	30,000	35,000	36,000	40,000	42,000
1982	28,500	31,600	37,500	40,000	42,000	45,000
1983	30,000	33,000	40,000	40,000	41,900	48,500

SOURCE: American Chemical Society, Salaries 1983 - Analysis of the American Chemical Society's 1983 Survey of Salaries and Employment, June 1983.

TABLE 62

MEDIAN SALARIES OF FULL-TIME EMPLOYED CHEMISTS* BY DEGREE LEVEL, SEX AND YEARS SINCE B.S., 1983

Years Since B. S.	BACHELOR'S		MASTER'S		Ph. D.	
	Men	Women	Men	Women	Men	Women
0-1	$19,600	$19,000	$	$	$	$
2-4	22,000	21,102	22,750	24,500		
5-9	26,400	23,000	27,000	24,619	33,840	33,450
10-14	30,000	26,000	30,500	28,800	35,100	32,700
15-19	36,800	26,050	35,000	28,300	40,000	33,000
20-24	39,000	31,000	37,353	39,100	42,000	32,140
25-29	41,000	29,900	42,010	27,500	45,840	32,000
30-34	40,000	31,050	41,104	27,500	48,000	35,346
35-39	40,200	34,560	40,800	28,000	49,100	33,500
≥ 40	43,000	46,000	42,000	29,000	50,800	37,359
All Years	32,000	24,000	35,000	27,000	40,300	33,000

* Includes only members of the American Chemical Society.

TABLE 63

MEDIAN ANNUAL SALARIES OF CHEMISTS* BY TYPE OF EMPLOYER, DEGREE LEVEL AND SEX, 1983

TYPE OF EMPLOYER	DEGREE LEVEL AND SEX								
	Bachelor's			Master's			Ph. D.'s		
	Men	Women	Total	Men	Women	Total	Men	Women	Total
Private Industry	$35,400	$30,000	$34,700	$39,000	$32,800	$38,200	$47,900	$41,200	$47,700
Government	31,500	26,700	30,700				43,500	$40,000	$43,300
College/University							34,100	28,600	33,700
Other Non-Academic	29,800	24,500	28,900						

* Includes only members of the American Chemical Society.

SOURCE: American Chemical Society, Salaries 1983 - Analysis of the American Chemical Society's 1983 Survey of Salaries and Employment, June 1983.

TABLE 64

MEDIAN SALARIES OF CHEMISTS* EMPLOYED IN PRIVATE INDUSTRY BY DEGREE LEVEL, SEX AND YEARS SINCE B. S., 1983

YEARS SINCE B. S.	BACHELOR'S		MASTER'S		Ph. D.	
	Men	Women	Men	Women	Men	Women
0-1	$20,424	$20,500	$	$	$	$
2-4	22,570	22,378	24,284	25,000		
5-9	27,300	23,000	28,000	25,000	34,980	35,000
10-14	31,200	26,450	32,000	31,500	39,121	37,200
15-19	37,000	27,000	38,050	31,400	44,600	39,000
20-24	39,880	31,750	40,250	40,900	50,000	40,400
25-29	43,000	26,400	46,000	30,000	52,000	43,000
30-34	40,000	35,000	43,250	36,000	55,000	43,600
35-39	40,000	36,000	44,000	33,064	54,000	54,000
$\geq$ 40	43,000	38,000	45,000	39,850	57,000	46,000
All Years	33,000	24,500	38,000	29,000	45,000	36,800

TABLE 65

MEDIAN ANNUAL SALARIES OF CHEMISTS* EMPLOYED IN PRIVATE INDUSTRY BY WORK FUNCTION, DEGREE LEVEL AND SEX, 1983

Degree Level and Sex	WORK FUNCTION							
	Management Non R&D	Management R&D	Basic Research	Applied Research	Marketing	Forensic	Prod. & Quality Control	Writing/ Editing
BACHELOR'S								
Men	$40,000	$42,000	$26,000	$31,260	$36,000	$26,653	$28,000	$31,546
Women	33,360	35,500	24,050	24,650	33,500	24,000	22,000	28,830
Total	40,000	41,000	25,000	29,500	35,124	25,700	26,458	29,365
MASTER'S								
Men	49,250	46,560	32,000	34,000	40,000	35,500	33,000	41,500
Women	35,000	34,000	27,750	27,643	32,500	23,580	26,000	35,928
Total	48,000	45,000	31,000	32,550	40,000	30,787	32,000	36,000
Ph. D.								
Men	55,200	53,000	41,000	41,580	45,000	42,000	41,500	42,780
Women	33,600	46,250	36,500	35,940	33,500	35,000	38,800	41,900
Total	55,000	53,000	40,090	41,000	42,728	41,000	41,000	42,000

* Includes only members of the American Chemical Society.

SOURCE: American Chemical Society, Salaries 1983 - Analysis of the American Chemical Society's 1983 Survey of Salaries and Employment, June 1983.

TABLE 66

MEDIAN ANNUAL SALARIES OF CHEMISTS* EMPLOYED IN PRIVATE INDUSTRY BY DEGREE LEVEL, SPECIALTY AND SEX, 1983

Degree and Sex	SPECIALTY									
	Analytical	Agricultural/ Food	Biochemistry	Environmental	Organic	Inorganic	Pharmaceuticals§	Physical	Polymer†	Other Chemistry
BACHELOR'S										
Men	$30,480	$35,000	$24,500	$34,000	$37,000	$33,000	$30,000	$36,000	$35,220	$33,450
Women	29,000	23,300	28,150	29,120	28,000	24,500	28,500	32,400	33,650	27,170
Total	28,275	32,925	24,000	30,750	35,000	31,400	27,300	38,000	34,000	32,000
MASTER'S										
Men	35,000	40,000	30,000	36,500	39,536	43,000	32,220	37,713	38,500	41,100
Women	29,000	23,300	28,150	29,120	28,000	24,500	28,500	32,400	33,650	27,170
Total	34,000	37,100	30,000	36,000	38,000	40,400	31,000	36,213	37,360	40,000
Ph. D.										
Men	42,000	43,000	44,000	47,500	45,000	42,000	45,600	46,000	46,000	46,000
Women	35,000	33,000	37,350	36,700	39,300	35,000	38,400	41,000	38,000	35,350
Total	40,690	42,300	41,800	47,000	44,850	41,400	45,000	45,000	46,000	45,100

*Includes only members of the American Chemical Society.

§Also includes medicinal and clinical chemistry. †Also includes macromolecular chemistry.

TABLE 67

MEDIAN AND MEAN SALARIES OF FULL-TIME EMPLOYED CHEMISTS* BY GEOGRAPHICAL REGION AND DEGREE LEVEL, 1983

GEOGRAPHICAL REGION	BACHELOR'S		MASTER'S		Ph. D.	
	Median	Mean	Median	Mean	Median	Mean
Pacific	$30,000	$32,747	$32,040	$35,363	$40,000	$42,163
Mountain	30,900	33,019	30,000	33,915	38,500	39,161
West North Central	28,500	31,450	30,050	34,006	37,385	38,876
West South Central	31,100	34,015	35,450	37,455	40,000	42,479
East North Central	30,000	32,406	33,000	34,678	40,000	41,867
East South Central	28,500	30,191	33,000	33,202	35,000	36,839
Middle Atlantic	30,000	33,114	34,000	36,350	43,000	44,599
South Atlantic	30,000	32,535	34,000	34,971	40,000	41,490
New England	28,780	31,975	31,772	34,006	40,000	41,621
All Regions	30,000	32,612	33,000	35,274	40,000	41,968

* Includes only members of the American Chemical Society.

SOURCE: American Chemical Society, Salaries 1983 - Analysis of the American Chemical Society's 1983 Survey of Salaries and Employment, June 1983.

TABLE 68

MEDIAN AND MEAN SALARIES OF EMPLOYED FULL-TIME CHEMISTS* IN PRIVATE INDUSTRY BY TYPE OF INDUSTRY AND DEGREE LEVEL, 1983

TYPE OF INDUSTRY	DEGREE LEVEL					
	BACHELOR'S		MASTER'S		Ph. D.	
	Median	Mean	Median	Mean	Median	Mean
Mfg. Chemistry	$33,300	$36,326	$39,720	$40,396	$45,000	$47,575
Mfg. Coatings	30,000	33,520	35,000	36,514	41,580	44,834
Mfg. Food	27,000	31,924	32,800	36,951	41,000	46,126
Mfg. Metals/Minerals	31,000	32,410	36,000	36,337	40,500	44,354
Mfg. Paper	30,000	30,085	34,660	34,151	41,000	43,922
Mfg. Petroleum	35,420	37,713	42,000	44,614	51,000	52,569
Mfg. Pharmaceuticals	27,100	29,977	31,500	33,498	45,000	47,957
Mfg. Rubber	36,000	38,675	40,000	42,236	45,000	47,211
Mfg. Other	31,000	33,295	36,000	37,730	43,350	46,049
Non-Manufacturing	25,557	29,295	34,000	35,359	45,000	45,866
ALL INDUSTRY	30,912	33,555	35,500	37,618	44,700	47,402

*Includes only members of the American Chemical Society.

TABLE 69

MEDIAN AND MEAN SALARIES OF FULL-TIME EMPLOYED CHEMISTS* IN PRIVATE INDUSTRY BY DEGREE LEVEL AND NUMBER OF SUBORDINATES, 1983

NUMBER OF SUBORDINATES	BACHELOR'S		MASTER'S		Ph. D.	
	Median	Mean	Median	Mean	Median	Mean
0	$25,000	$27,514	$30,694	$32,547	$39,300	$41,631
1-2	32,000	33,836	35,000	35,937	40,550	43,555
3-7	35,000	35,500	36,000	37,707	45,000	47,784
8-12	37,820	39,414	40,500	42,933	49,250	51,544
13-17	39,750	42,778	45,750	43,987	52,000	54,208
18-22	40,000	41,456	49,000	48,744	56,000	59,006
23-32	45,250	49,027	45,250	49,820	55,050	57,396
33-47	52,000	52,435	56,000	57,150	65,000	65,003
48-67	55,000	56,612	54,500	54,614	65,000	65,989
68-99	68,500	74,340	53,280	59,760	72,300	72,450
≥ 100	65,000	67,338	60,000	59,467	74,300	72,644
Total	30,912	33,555	35,500	37,618	44,700	47,402

* Includes only members of the American Chemical Society.

SOURCE: American Chemical Society, Salaries 1983 - Analysis of the American Chemical Society's 1983 Survey of Salaries and Employment, June 1983.

TABLE 70

1983 MEDIAN AND MEAN SALARIES OF CHEMISTS* BY DEGREE LEVEL AND SELECTED STATES

SELECTED STATES	BACHELOR'S		MASTER'S		Ph. D.	
	Median	Mean	Median	Mean	Median	Mean
California	$31,200	$33,703	$32,500	$36,381	$45,144	$47,106
Texas	32,000	34,716	35,000	37,104	45,550	47,817
Illinois	30,000	33,022	35,000	37,046	44,000	47,468
Michigan	28,000	30,423	35,000	35,489	46,000	47,704
Ohio	32,000	33,777	36,000	36,623	42,500	44,308
New Jersey	32,000	34,590	36,150	39,380	46,000	48,849
New York	29,000	31,762	36,000	37,070	45,250	47,604
Pennsylvania	30,490	33,537	31,700	34,123	45,000	46,109
Other States	30,000	32,257	35,000	36,501	43,000	45,885
Total All States	30,000	32,885	35,000	36,762	44,000	46,629

TABLE 71

1983 MEDIAN SALARY OF EMPLOYED INDUSTRIAL CHEMISTS* AND ALL CHEMISTS BY DEGREE LEVEL AND YEARS OF EXPERIENCE

YEARS	BACHELOR'S		MASTER'S		Ph. D.	
	All	Industrial	All	Industrial	All	Industrial
0-1	$19,400	$20,424	$	$	$	$
2-4	22,000	22,475	23,784	25,000		
5-9	25,000	26,280	26,000	27,600	33,600	35,000
10-14	30,000	30,750	30,353	32,000	35,000	38,900
15-19	35,000	36,000	33,900	36,750	39,000	44,000
20-24	37,800	39,000	37,850	40,250	41,000	49,800
25-29	40,000	42,820	41,000	44,850	45,000	52,000
30-34	40,000	40,000	40,200	43,000	47,000	55,000
35-39	39,000	40,000	39,000	42,000	48,050	54,000
≥ 40	43,000	43,000	42,000	43,500	50,000	57,000
Overall	30,000	30,912	33,000	35,500	40,000	44,700

* Includes only members of the American Chemical Society.

SOURCE: American Chemical Society, Salaries 1983 - Analysis of the American Chemical Society's 1983 Survey of Salaries and Employment, June 1983.

TABLE 72

MEDIAN AND MEAN SALARIES OF EMPLOYED CHEMICAL ENGINEERS* BY DEGREE LEVEL AND YEARS SINCE B. S., 1983

YEARS SINCE B. S.	BACHELOR'S		MASTER'S		DOCTORATE	
	Median	Mean	Median	Mean	Median	Mean
0-1	$26,260	$26,587	$	$	$	$
2-4	27,000	27,382	31,400	31,068		
5-9	29,936	32,436	32,000	33,705	38,450	38,328
10-14	37,250	37,681	37,500	37,280	42,949	42,160
15-19	40,700	47,149	40,600	43,205	50,000	50,066
20-24	48,200	49,134	55,000	53,497	53,300	54,226
25-29	52,000	50,622	46,700	51,243	55,500	56,365
30-34	45,000	47,333	54,000	62,101	52,000	55,464
35-39	48,000	48,327	48,600	50,710	54,270	52,568
≥ 40	48,900	51,054	54,500	55,561	50,000	54,027
All Years	40,000	42,054	41,900	46,182	48,500	50,462

*Includes only members of the American Chemical Society.

SOURCE: Industrial Chemical News, October 1982.

TABLE 73

MONTHLY AVERAGE SALARIES OF INDUSTRIAL CHEMISTS BY DEGREE LEVEL AND YEARS OF EXPERIENCE, 1982

YEARS OF EXPERIENCE	B. S.	M. S.	Ph.D.
0	$1,765	$2,172	$2,695
5	2,535	2,956	3,432
10	3,041	3,547	4,181
Overall*	3,384	5,094	5,724

* Highest Average Salary.

SOURCE: American Institute of Chemists, The Chemist, November/December 1982.

TABLE 74

MEDIAN ANNUAL SALARY OF MEMBERS OF THE AIC* BY TYPE OF EMPLOYER AND DEGREE, 1982

TYPE OF EMPLOYER	B.S.	M.S.	Ph.D.
Industry	$37,000	$45,000	$48,000
Education			37,600
Non-Profit		37,500	47,000
Government	35,000		
Self-Employed			40,000
Total Salary	31,500	38,000	45,000
Total Income	35,000	44,000	48,000

TABLE 75

MEDIAN ANNUAL SALARY OF PH.D. MEMBERS OF THE AIC* BY DEGREE SPECIALTY, 1982

DEGREE SPECIALTY	Ph.D.	% in Field
Analytical	$42,500	17.9%
Biochemistry	40,300	10.9
Inorganic	44,500	5.3
Organic	45,000	16.7
Physical	47,600	9.4
Polymer	51,000	9.0
Chemical Engineering	54,000	9.8
Other	45,800	21.0

TABLE 76

MEDIAN ANNUAL SALARY OF MEMBERS OF THE AIC* BY WORK ACTIVITY AND DEGREE LEVEL, 1982

WORK ACTIVITY	B.S.	M.S.	Ph.D.
Research and Development	$28,700	$35,000	$46,000
Management	40,700	50,000	53,000
Sales, Services	33,000	30,000	40,400
Consulting			35,000
Teaching			35,000
Other			31,500

* American Institute of Chemists.

SOURCE: American Institute of Chemists, The Chemist, November/December 1982.

TABLE 77

MEDIAN ANNUAL SALARY OF MEMBERS OF THE AIC* BY GEOGRAPHICAL REGION AND DEGREE LEVEL, 1982

GEOGRAPHICAL REGION	B.S.	M.S.	Ph.D.
Pacific	$	$33,900	$46,400
Mountain			45,500
West North Central			
East North Central	39,600	35,000	48,000
West South Central	24,500		40,400
East South Central			46,400
Middle Atlantic	36,000	41,300	44,000
South Atlantic	30,500	42,500	45,800
New England			42,000

* American Institute of Chemists.

SOURCE: American Mathematical Society, NOTICES, Vol. 29, No. 7, Issue 221, November 1982.

TABLE 78

MEDIAN SALARIES IN MATHEMATICS FOR PH.D.'S WITH ONE YEAR OF EXPERIENCE BY TYPE OF EMPLOYER AND SEX, 1982

TYPE OF EMPLOYER	MEN	WOMEN
Teaching or Teaching - Academic & Research (9 months)	$20,900	$20,000
Teaching or Teaching - Academic & Research (12 months)	24,000	25,200
Research (12 months) - Academic	23,000	26,500
Business & Industry (12 months)	35,500	34,700
Government (12 months)	33,100	32,600

SOURCE: American Psychological Association, Salaries in Psychology, 1982, August 1982.

TABLE 79

MEDIAN AND MEAN SALARIES OF DOCTORAL-LEVEL PSYCHOLOGISTS† ON 11-12 MONTH BASIS BY TYPE OF POSITION AND YEARS OF WORK EXPERIENCE, 1982

TYPE OF POSTION	YEARS OF WORK EXPERIENCE							
	0-1	2-4	5-9	10-14	15-19	20-24	25-29	30+
EDUCATIONAL ADMINISTRATION								
Median	$	$27,000	$29,500	$34,000	$40,000	$40,500	$42,000	$50,500
Mean		28,000	30,250	34,915	40,526	41,594	39,862	54,192
RESEARCH								
Median	14,000	24,000	30,000	37,000	38,500	43,000	44,500	46,000
Mean	19,385	24,978	30,855	38,622	39,233	43,483	47,364	47,286
ADMINISTRATION OF RESEARCH								
Median		29,000	36,000	43,000	46,500	45,000	52,000	56,000
Mean		30,133	36,923	45,023	48,694	48,806	53,483	57,261
DIRECT HUMAN SERVICES (Clinical Psychology)								
Median	23,000	27,000	34,000	40,000	44,000	44,000	44,500	48,000
Mean	25,089	29,998	39,379	45,165	49,873	52,016	52,593	54,162
DIRECT HUMAN SERVICES (Counseling Psychology)								
Median	22,000	23,000	28,000	33,500	34,000	36,500	35,000	35,000
Mean	22,000	28,122	32,106	36,800	39,111	44,538	39,280	38,533
DIRECT HUMAN SERVICES* (School Psychology)								
Median		20,000	23,000	26,500	29,500	29,000	30,000	33,000
Mean		19,621	24,321	27,019	28,417	28,960	30,250	33,143
DIRECT HUMAN SERVICES (Other Psychology)								
Median		26,000	31,000	31,000	37,000	34,000	38,000	44,000
Mean		28,167	38,829	36,044	41,235	40,812	43,000	59,111
ADMINISTRATION OF HUMAN SERVICES								
Median		26,000	31,000	35,000	38,000	40,000	42,000	41,000
Mean		26,582	31,468	36,444	39,087	40,202	44,828	44,870
APPLIED PSYCHOLOGY (Industrial/Organizational Psych.)								
Median		29,000	40,000	57,000	52,500	51,000	73,000	55,000
Mean		33,407	41,094	55,140	54,500	58,000	71,571	62,615
APPLIED PSYCHOLOGY (Other Psychology)								
Median	25,000	29,000	33,000	37,500	37,500	65,000	48,500	51,000
Mean	24,000	29,143	34,961	49,870	43,378	58,111	53,000	49,000
ADMINISTRATION OF APPLIED PSYCHOLOGY								
Median		34,000	35,000	39,000	48,500	46,500	47,500	61,000
Mean		38,263	37,116	45,036	52,412	55,792	58,033	63,760
OTHER ADMINISTRATIVE								
Median		27,000	33,500	43,000	45,500	35,250	56,000	47,500
Mean		36,200	37,781	47,784	52,864	48,292	55,548	54,200

† Members of the American Psychological Association. * 9-10 Month Salaries

NOTE: Blanks indicate salaries not provided for those positions with fewer than 5 respondents.

SOURCE: American Psychological Association, Salaries in Psychology, 1982, August 1982.

TABLE 80

MEDIAN AND MEAN SALARIES OF MASTERS-LEVEL PSYCHOLOGISTS† ON 11-12 MONTH BASIS BY TYPE OF POSITION AND YEARS OF WORK EXPERIENCE, 1982

TYPE OF POSTION	YEARS OF WORK EXPERIENCE							
	0-1	2-4	5-9	10-14	15-19	20-24	25-29	30+
EDUCATIONAL ADMINISTRATION								
Median	$	$	$25,000	$	$29,500	$30,000	$	$33,000
Mean			25,889		34,500	30,857		34,286
RESEARCH								
Median		21,000	23,500			37,000		
Mean		23,286	23,167			37,833		
ADMINISTRATION OF RESEARCH								
Median						42,000		52,000
Mean						45,000		49,429
DIRECT HUMAN SERVICES (Clinical Psychology)								
Median	19,000	18,000	22,000	26,000	27,000	32,000	30,000	30,000
Mean	16,800	18,091	23,732	27,620	33,462	33,846	41,044	33,360
DIRECT HUMAN SERVICES (Counseling Psychology)								
Median		18,000	22,000	24,000	30,000	34,000	32,000	31,000
Mean		20,056	23,840	25,733	35,462	33,286	34,333	45,800
DIRECT HUMAN SERVICES* (School Psychology)								
Median		16,000	20,000	26,000	26,500	29,000	30,000	27,000
Mean		16,643	20,188	27,889	26,944	29,962	27,846	27,615
DIRECT HUMAN SERVICES (Other Psychology)								
Median	21,500	20,000	21,000	26,000	28,000	32,000	31,500	33,500
Mean	21,500	15,533	20,826	29,500	27,200	27,800	43,000	33,167
ADMINISTRATION OF HUMAN SERVICES								
Median		20,000	23,000	29,000	30,000	32,000	38,000	38,000
Mean		20,909	23,976	28,683	30,444	35,231	41,824	35,867
APPLIED PSYCHOLOGY (Industrial/Organizational Psych.)								
Median		26,000	31,000	48,000				48,000
Mean		26,692	31,444	50,500				45,818
APPLIED PSYCHOLOGY (Other Psychology)								
Median			27,000			35,000		
Mean			25,286			35,600		
ADMINISTRATION OF APPLIED PSYCHOLOGY								
Median		27,500				57,000		44,000
Mean		25,833				53,200		42,083
OTHER ADMINISTRATIVE								
Median			27,000	35,000	46,000	37,500	32,000	43,000
Mean			26,286	37,222	47,857	44,700	36,800	49,294

† Members of the American Psychological Association. * 9-10 Month Salaries.

NOTE: Blanks indicate salaries not provided for those positions with fewer than 5 respondents.

SOURCE: American Institute of Physics, Society Membership, 1981 Profile: An Expanded View, R-306, October 1982.

TABLE 81

1981 SALARIES OF PHYSICISTS* BY DEGREE LEVEL

DEGREE LEVEL	No.	Median	Mean
Ph.D.	3,574	$36,000	$37,100
Master's	778	31,000	33,400
Bachelor's	344	35,000	36,300

TABLE 82

1981 SALARIES OF PH.D. PHYSICISTS* BY PRINCIPAL WORK ACTIVITY

PRINCIPAL WORK ACTIVITY	Number	Median
Teaching	821	$28,700
Basic Research	1,043	33,600
Applied Research	805	38,000
Development	211	41,000
Design/Engineering	131	38,200
Administration	418	49,300
Other	117	40,500

* Members of the AIP Member Societies.

TABLE 83

1981 SALARIES OF PH.D. PHYSICISTS* BY YEARS SINCE PH.D.

YEARS SINCE PH.D.	No.	Median	Mean
0-4	568	$27,500	$26,800
5-9	727	32,000	32,500
10-14	774	36,000	36,800
15-19	562	40,000	40,100
20-24	339	43,000	43,800
25-29	315	44,700	46,100
30+	233	48,000	47,900

* Includes only members of the AIP member societies.

SOURCE: American Institute of Physics, Society Membership, 1981 Profile: An Expanded View, R-306, October 1982.

TABLE 84

1981 SALARIES OF PHYSICISTS* BY TYPE OF EMPLOYER AND DEGREE LEVEL

EMPLOYER	PH.D.'S			MASTER'S			OVERALL*		
	No.	Median	Mean	No.	Median	Mean	No.	Median	Mean
University		$	$		$	$	1,546	$30,500	$32,300
9-10 month	787	30,000	31,200						
11-12 month	594	33,000	34,100						
College							203	24,000	24,800
9-10 month	142	23,000	24,400						
Junior College							87	25,800	25,900
Industry/Self-Employed	937	41,800	44,800	331	37,000	39,600	1,510	40,000	42,700
Government	396	40,000	40,500	108	35,600	36,800	551	40,000	39,700
FFR & DC†	411	38,000	38,600				458	37,600	38,100
Secondary School				139	23,000	23,100	185	22,000	22,600
Nonprofit	101	38,000	39,900	31	33,000	33,800	146	36,000	37,900
Other	23	40,000	39,200				49	32,000	34,800

* Includes physicists at all degree levels.
† Federally-funded research and development centers.

TABLE 85

1980 AND 1981 SALARIES OF PHYSICISTS* BY EMPLOYMENT SECTOR AND SEX

EMPLOYMENT SECTOR	MALE			FEMALE		
	No.	Median	Mean	No.	Median	Mean
Academic						
1980	547	$27,200	$29,000	24	$20,700	$22,500
1981	424	31,000	32,700	24	22,900	25,700
Non Academic						
1980	606	36,000	38,300	24	32,000	33,400
1981	496	41,600	42,800	19	35,100	35,200
Industry						
1981	1,425	40,000	43,100	57	30,000	32,100

TABLE 86

1981 SALARIES OF PH.D. PHYSICISTS* BY GEOGRAPHIC REGION

GEOGRAPHIC REGION	No.	Median	Mean
New England	328	$36,900	$37,400
Middle Atlantic	676	37,800	39,100
South Atlantic	596	36,700	37,400
East North Central	482	34,000	35,200
East South Central	132	32,000	32,200
West North Central	149	31,000	31,600
West South Central	212	33,000	34,100
Mountain	320	35,000	35,800
Pacific	681	38,000	39,700

* Includes only members of the AIP member societies.

SOURCE: Hitchcock Publishing Company, "25th Annual DP Salary Survey," Infosystems, June 1983.

TABLE 87

AVERAGE AND MEDIAN WEEKLY SALARIES IN DATA PROCESSING BY JOB DESCRIPTION, 1983

JOB DESCRIPTION	Number Reported	Average Salary	Median Salary
Top Management Official	240	$959	$942
Data Base Systems Manager	77	648	617
Manager of Data Processing	930	670	673
Asst. Manager of Data Processing	127	627	634
Project/Team Leader	332	656	634
Mgr./Supvr. of Computer Systems Analysis & Prog.	368	691	681
Lead Computer Systems Analyst & Programmer	485	[illegible]	567
Senior Computer Systems Analyst & Programmer	988	515	510
Junior Computer Systems Analyst & Programmer	655	408	403
Mgr./Supvr. of Computer Systems Analysis	54	688	679
Lead Computer Systems Analyst	66	609	600
Senior Computer Systems Analyst	182	570	565
Junior Computer Systems Analyst	129	513	516
Mgr./Supvr. of Systems Programming	99	669	668
Lead Systems Programmer	99	579	516
Senior Systems Programmer	255	526	526
Junior Systems Programmer	146	430	442
Systems Programmer Trainee	40	345	330
Mgr./Supvr. of Applications Programming	107	618	615
Lead Applications Programmer	171	524	521
Senior Applications Programmer	652	452	446
Junior Applications Programmer	635	364	365
Applications Programmer Trainee	135	308	302
Data Communications Manager	39	619	621
Data Communications Operator	65	367	344
Mgr./Supvr. of Computer Operations	452	488	472
Lead Computer Operator	592	358	346
Senior Computer Operator	1,026	325	310
Junior Computer Operator	912	271	267
Computer I/O Control Manager	175	333	307
Tape Librarian	128	282	270
Key Entry Supervisor	229	330	323
Lead Key Entry Operator	388	274	269
Senior Key Entry Operator	1,207	253	250
Junior Key Entry Operator	615	222	222

SOURCE: Hitchcock Publishing Company, "25th Annual DP Salary Survey," Infosystems, June 1983.

TABLE 88

AVERAGE WEEKLY SALARIES OF DATA PROCESSING PERSONNEL BY JOB DESCRIPTION AND GEOGRAPHIC AREA, 1983

JOB DESCRIPTION	GEOGRAPHIC AREA									
	New England	Middle Atlantic	South Atlantic	East North Central	East South Central	West North Central	West South Central	Mountain	Pacific	Overall
Top Management Official	$929	$977	$918	$923	$784	$1,008	$1,057	$936	$965	$959
Data Base Systems Manager	680	632	645	587		702	646	731	732	648
Manager of Data Processing	676	687	646	653	597	672	696	724	676	670
Assistant Manager of Data Processing		663	555	576	528	591	632	668	576	627
Project/Team Leader	614	734	549	672	600	629	619	650	693	656
Manager/Supervisor of Computer System Analysis and Programming	67>	750	614	690	581	688	647	727	730	691
Lead Computer Systems Analyst and Programmer	562	615	472	576	489	517	591	537	575	567
Senior Computer Systems Analyst and Programmer	510	526	461	518	447	491	509	527	538	515
Junior Computer Systems Analyst and Programmer	409	437	359	410	413	401	389	446	411	408
Manager/Supervisor of Computer Systems Analysis		630	668	703	543	746	719	825	671	688
Lead Computer Systems Analyst	574	585	574	662		598	596	629	649	609
Senior Computer Systems Analyst	562	568	522	555		568	564	588	593	570
Junior Computer Systems Analyst	456	421	424	503	388	552	498	469	585	513
Manager/Supervisor of Systems Programming		693	636	658	580	673	749	710	603	669
Lead Systems Programmer		612	530	587		554	678	578	555	579
Senior Systems Programmer	465	516	472	505	525	529	586	547	547	526
Junior Systems Programmer	360	408	395	401	489	468	520	429	454	430
Systems Programmer Trainee		377	316	322	322	367	403	323	324	345
Manager/Supervisor of Applications Programming	698	626	522	595		598		694	675	618
Lead Applications Programmer	576	498	484	504		530	474	531	557	524
Senior Applications Programmer	462	476	392	445	435	429	471	520	481	452
Junior Applications Programmer	355	356	338	351	344	367	372	413	397	364
Applications Programmer Trainee	308	342	289	298	250	309	314	291	341	308
Data Communications Manager		572	477	650		655		537	674	619
Data Communications Operator	281	336	276	398			348	329	416	367
Manager/Supervisor of Computer Operations	482	501	442	482	465	466	519	549	516	488
Lead Computer Operator	355	398	308	333	333	328	351	411	405	358
Senior Computer Operator	300	370	289	312	290	297	316	344	353	325
Junior Computer Operator	266	267	253	267	240	262	279	301	290	271
Computer I/O Control Manager	281	368	260	340	279	366	327	388	365	333
Tape Librarian	241	315	291	280	245	256	247	288	290	282
Key Entry Supervisor	325	324	300	330	291	284	355	387	379	330
Lead Key Entry Operator	263	273	246	277	217	255	264	294	314	274
Senior Key Entry Operator	244	245	216	252	214	247	238	268	291	253
Junior Key Entry Operator	207	195	203	222	180	210	204	262	260	222

NOTE: Blanks denote insufficient information.

SOURCE: Hitchcock Publishing Company, "25th Annual DP Salary Survey," Infosystems, June 1983.

TABLE 89

AVERAGE WEEKLY SALARIES OF DATA PROCESSING PERSONNEL BY JOB DESCRIPTION AND TYPE OF INDUSTRY, 1983

JOB DESCRIPTION	TYPE OF INDUSTRY												
										MANUFACTURING AND PROCESSING			
	Banks, Financial	Educational	Governmental Agencies	Hospital/ Health Care	Retail Sales & Distr.	Data Proc. Service Ctrs.	Transportation	Wholesale Sales & Distr.	Insurance	Electrical/ Electronic	Food Tobacco Drugs	Chemicals, Petro. Coal	Metal Producing & Fab.
Top Management Official	$1,091	$822	$838	$873	$920	$987	$1,078	$891	$990	$907	$1,018	$1,021	$902
Data Base Systems Manager	527	534	707	609	678	854	807	609		610	827	607	632
Manager of Data Processing	718	640	692	686	630	693	777	631	706	661	673	703	696
Asst. Manager of Data Processing	636	550		545	487	541	608	517	639		634	578	619
Project/Team Leader	716	619	571	543	646	786	729	615	647	701	681	591	747
Manager/Supervisor of Computer System Analysis and Programming	717	701	670	620	666	727	731	582	664	755	729	723	754
Lead Computer Systems Analyst & Programmer	554	527	571	504	573	628	578	551	545	548	551	582	711
Senior Computer Systems Analyst & Programmer	544	487	509	459	533	523	542	510	461	505	516	510	593
Junior Computer Systems Analyst & Programmer	427	413	404	393	419	454	437	407	384	435	380	440	375
Manager/Supervisor of Computer Systems Analysis	716		819	713		658		662	698	684		654	
Lead Computer Systems Analyst			624	599	599	614		648	614	624	701	580	
Senior Computer Systems Analyst	631	490	515	516	530	493		534	546	535	699		588
Junior Computer Systems Analyst	436		378	453	480	471	461		514	477	580	524	497
Manager/Supervisor of Systems Programming	739	571	661	603	668	539		682	699	708	758	689	724
Lead Systems Programmer	621	522	534	559	576		747	647	569	641	646	564	583
Senior Systems Programmer	606	510	489	504	529	531	572	534	522	522	490	561	520
Junior Systems Programmer	454	366	375	426	426	370	372	509	498	412		419	435
Programmer Trainee	354		302		331	308	403		352	347	403		
Manager/Supervisor of Applications Programming	618	564	558	645	524	616		625	617	647		672	595
Lead Applications Programmer	558	521	483	597		579	522	444	508	536	511	582	572
Senior Applications Programmer	480	423	449	451	422	486	477	433	429	458	480	464	440
Junior Applications Programmer	337	354	374	379	373	355	410	343	344	415	382	385	373
Applications Programmer Trainee	261	313	302	304	353	299	323	326	288	357	292	341	305
Data Communications Manager	583	528	572			578			628		634		627
Data Communications Operator	293	329	371			305		364	404			307	462
Manager/Supervisor of Computer Operations	460	474	496	478	494	567	517	454	521	531	486	542	497
Lead Computer Operator	375	339	433	326	302	391	392	312	346	399	345	363	335
Senior Computer Operator	309	292	390	313	294	322	363	302	308	334	312	309	314
Junior Computer Operator	267	283	308	252	242	272	262	250	274	273	253	269	277
Computer I/O Control Manager	328	314	326	280	293	402	352	359	364	359	396	413	348
Tape Librarian	230	304	326	287	256	249	284	270	262	223	274	324	229
Key Entry Supervisor	304	330	346	329	308	383	347	329	333	334	319	351	317
Lead Key Entry Operator	238	284	275	279	276	295	316	271	268	292	275	287	281
Senior Key Entry Operator	230	238	256	259	226	282	256	256	245	258	236	258	263
Junior Key Entry Operator	197	213	252	222	210	250	205	236	232	229	198	232	219

NOTE: Blanks denote insufficient information.

SOURCE: Association of Data Processing Services Organizations, 1983 ADAPSO Compensation Survey as of March 1983.

TABLE 90

MEAN AND MEDIAN ANNUAL SALARIES OF OPERATING SYSTEMS/SOFTWARE PROGRAMMER/ANALYSTS BY GEOGRAPHIC AREA AND LEVEL, 1983

GEOGRAPHIC AREA	Lead		Senior		Intermediate		Associate		Trainee	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median
Northeast	$36,100	$34,400	$32,800	$33,000	$26,300	$26,300	$21,500	$21,600	$17,200	$15,300
Southeast	34,300	36,300	34,100	33,500	27,600	27,800	21,600	22,700		
Midwest	33,900	33,900	30,000	29,500	25,800	25,700	22,800	23,000	15,800	14,700
Southwest	33,900	33,700	31,400	30,200	26,200	25,200	21,600	21,600	15,000	14,600
NW/Rocky Mts.			33,600	33,000	26,300	26,300				
Calif./Hawaii	36,200	35,700	32,000	32,000	27,300	27,500	23,500	24,200		
Overall	35,000	35,500	32,300	32,000	26,500	26,400	22,600	22,900	16,300	15,200

TABLE 91

MEAN AND MEDIAN ANNUAL SALARIES OF APPLICATIONS PROGRAMMER/ANALYSTS BY GEOGRAPHIC AREA AND LEVEL, 1983

GEOGRAPHIC AREA	Lead		Senior		Intermediate		Associate		Trainee	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median
Northeast	$30,800	$31,000	$27,400	$27,500	$23,900	$24,000	$20,300	$20,100	$16,800	$16,100
Southeast	35,800	35,100	29,600	29,200	24,700	24,500	20,600	20,300	16,100	16,000
Midwest	31,000	30,800	27,200	27,000	23,800	23,900	20,800	21,300	16,600	15,800
Southwest	32,800	32,100	26,000	25,800	22,800	22,000	19,200	18,900	17,200	17,600
NW/Rocky Mts.	38,500	38,800	30,400	30,200	26,300	26,400	23,600	24,100	21,400	21,900
Calif./Hawaii	36,000	35,000	28,900	29,400	26,100	25,900	22,600	22,000	17,800	17,000
Overall	32,900	32,600	28,300	28,400	24,500	24,400	20,800	21,000	17,300	16,800

TABLE 92

MEAN AND MEDIAN ANNUAL SALARIES AND AVERAGE TOTAL COMPENSATION* OF SOFTWARE ENGINEERS BY GEOGRAPHIC AREA AND LEVEL, 1983

GEOGRAPHIC AREA	Lead			Senior			Software Engineer		
	Mean	Median	Total Comp.	Mean	Median	Total Comp.	Mean	Median	Total Comp.
Northeast	$37,400	$37,400	$38,000	$29,600	$28,000	$30,600	$24,700	$24,000	$25,400
Southeast	40,000	40,100	40,500	29,400	29,400	29,400			
Midwest	33,800	33,300	34,300	30,000	29,100	30,400	24,700	24,400	24,900
Southwest	35,600	35,000	35,600	30,800	30,100	30,900	24,900	24,000	24,900
Calif./Hawaii	38,200	38,000	38,200	30,900	31,000	30,900	26,200	26,000	26,300
Overall	38,100	38,000		31,600	31,200		25,300	25,300	

* Salary plus Bonus.

SOURCE: Association of Data Processing Services Organizations, 1983 ADAPSO Compensation Survey as of March 1, 1983.

TABLE 93

MEAN AND MEDIAN SALARIES OF FIELD ENGINEERING REPRESENTATIVE/TELECOMMUNICATIONS ANALYSTS BY GEOGRAPHIC AREA AND LEVEL, 1983

GEOGRAPHIC AREA	Senior		Intermediate		Trainee	
	Mean	Median	Mean	Median	Mean	Median
Northeast	$25,800	$27,100	$21,400	$20,900	$16,400	$15,600
Southeast	25,700	26,400	19,500	19,100	18,200	22,000
Midwest	28,800	28,500	21,200	21,900	20,900	21,100
Southwest	28,200	28,500	21,900	21,600	18,700	17,900
NW/Rocky Mts.	29,100	28,500	24,300	24,300		
Calif./Hawaii	28,700	28,000	22,600	22,700	17,600	16,200
Overall	28,200	28,100	21,900	22,300	18,900	19,500

TABLE 94

MEAN AND MEDIAN SALARIES OF CUSTOMER SUPPORT (TECH) REPRESENTATIVES BY GEOGRAPHIC AREA AND LEVEL, 1983

GEOGRAPHIC AREA	Senior		Intermediate		Trainee	
	Mean	Median	Mean	Median	Mean	Median
Northeast	$32,500	$32,500	$26,200	$26,000	$20,100	$19,200
Southeast	32,000	32,700	25,000	25,200	20,400	19,800
Midwest	33,700	34,100	28,600	28,600	20,500	20,000
Southwest	33,800	34,400	28,600	28,900	25,000	25,500
NW/Rocky Mts.	29,500	31,000	21,600	21,500	16,800	16,000
Calif./Hawaii	29,900	29,200	25,700	24,600	20,300	19,700
Overall	33,600	33,600	27,400	27,400	21,500	20,400

TABLE 95

MEAN AND MEDIAN SALARIES OF PROFESSIONAL SERVICES/PROJECT LEADERS BY GEOGRAPHIC AREA AND LEVEL, 1983

GEOGRAPHIC AREA	Senior		Intermediate		Trainee	
	Mean	Median	Mean	Median	Mean	Median
Northeast	$35,700	$34,500	$27,300	$26,400	$25,900	$25,900
Southeast	32,900	33,200	25,000	24,400	25,000	25,000
Midwest	30,800	30,500	24,800	24,000	23,400	23,800
Southwest	31,000	31,200	25,800	25,000		
NW/Rocky Mts.	41,500	41,800				
Calif./Hawaii	37,000	36,200	27,200	25,800	27,000	24,300
Overall	34,600	33,400	26,800	25,900	25,100	25,100

SOURCE: Administrative Management Society, First Annual Systems and Processing Salaries Report, 1983

TABLE 96

MEDIAN SALARIES OF DATA PROCESSING PERSONNEL BY OCCUPATIONAL TITLE AND GEOGRAPHICAL AREA, 1982

OCCUPATIONAL TITLE	GEOGRAPHICAL AREA					
	Total U.S.	East	East Central	West Central	South	West
Data Base Administrator	$32,000	$32,000	$	$32,000	$32,000	$36,000
Software Systems Programmer	24,500	23,500	24,500	24,500	26,000	28,000
Senior Software Sys. Programmer	30,000	30,000	30,000	30,000	32,000	32,000
Mgr., Software Sys. Programming	34,000	36,000	36,000	34,000	36,000	36,000
Programmer	19,500	18,500	20,500	19,500	18,500	20,500
Programmer/Analyst	23,500	22,500	23,500	22,500	22,500	26,000
Systems Analyst	28,000	28,000	28,000	26,000	28,000	28,000
Project Leader	32,000	32,000	32,000	30,000	32,000	32,000
Mgr., Applications Programming	36,000	34,000	36,000	34,000	36,000	38,000
Data Entry Operator (Level B)	11,500	11,500	11,500	10,500	11,500	11,500
Data Entry Operator (Level A)	12,500	12,500	13,500	11,500	11,500	12,500
Lead Data Entry Operator	14,500	13,500	14,500	13,500	13,500	14,500
Supervisor, Data Entry	17,500	17,500	18,500	16,500	17,500	18,500
Data Quality Control Clerk	13,500	13,500	13,500	12,500	13,500	13,500
Tape Librarian	13,500	13,500	13,500	12,500	13,500	14,500
Computer Operator (Level B)	13,500	13,500	14,500	13,500	13,500	14,500
Computer Operator (Level A)	15,500	16,500	16,500	15,500	14,500	16,500
Lead Computer Operator	18,500	18,500	19,500	17,500	17,500	18,500
Supervisor, Computer Operations	23,500	23,500	24,500	22,500	26,000	23,500
Mgr., Computer Operations	32,000	32,000	32,000	32,000	34,000	34,000

SOURCE: Administrative Management Society, First Annual Systems and Processing Salaries Report, 1983.

TABLE 97

MEDIAN SALARIES OF DATA PROCESSING PERSONNEL BY OCCUPATIONAL TITLE AND TYPE OF BUSINESS, 1982

OCCUPATIONAL TITLE	TYPE OF BUSINESS					
	Mfg./ Processing	Banking/ Insur./ Finance	Retail/ Wholesale Sales/Dist.	Utilities	Data Proc. Serv. Bur.	All Other
Data Base Administrator	$34,000	$34,000	$30,000	$32,000	$24,500	$30,000
Software Systems Programmer	26,000	23,500	23,500	28,000	26,000	24,500
Senior Software Sys. Programmer	34,000	30,000	30,000	34,000	32,000	30,000
Mgr., Software Sys. Programming	38,000	34,000	34,000	40,000	38,000	34,000
Programmer	20,500	18,500	18,500	21,500	18,500	19,500
Programmer/Analyst	24,500	22,500	22,500	24,500	22,500	23,500
Systems Analyst	28,000	28,000	28,000	28,000	26,000	28,000
Project Leader	32,000	32,000	30,000	34,000	32,000	30,000
Mgr., Applications Programming	38,000	36,000	34,000	42,000	36,000	32,000
Data Entry Operator (Level B)	11,500	10,500	10,500	13,500	10,500	12,500
Data Entry Operator (Level A)	13,500	12,500	12,500	15,500	11,500	11,500
Lead Data Entry Operator	15,500	13,500	13,500	16,500	13,500	14,500
Supervisor, Data Entry	19,500	17,500	16,500	22,500	17,500	16,500
Data Quality Control Clerk	14,500	11,500	12,500	16,500	11,500	13,500
Tape Librarian	14,500	12,500	12,500	17,500	11,500	13,500
Computer Operator (Level B)	14,500	13,500	12,500	16,500	12,500	13,500
Computer Operator (Level A)	16,500	15,500	14,500	19,500	13,500	16,500
Lead Computer Operator	19,500	17,500	16,500	23,500	16,500	18,500
Supervisor, Computer Operations	24,500	22,500	20,500	30,000	20,500	23,500
Mgr., Computer Operations	32,000	32,000	28,000	38,000	32,000	32,000

SOURCE: 1983 Computer Salary Survey and Career Planning Guide, Source EDP.

TABLE 98

MEDIAN SALARIES OF NON-MANAGEMENT COMPUTER PROFESSIONALS BY POSITION AND LENGTH OF EXPERIENCE, 1983

NON-MANAGEMENT POSITIONS	LENGTH OF EXPERIENCE				
	6 Months-1 Year	1 Year-2 Years	2 Years-4 Years	Over 4 Years	Over 6 Years
Commercial Programmers and Programmer Analysts	$20,000	$22,900	$26,800	$31,300	$
Scientific/Engineering Programmers & Programmer Analysts	20,700	24,400	28,800	33,800	
Mini/Microcomputer Programmers & Programmer Analysts	20,900	24,000	27,700	34,500	
Systems (Software) Programmers		27,300	31,700	38,100	
Data Base Specialists		26,900	32,100	40,100	
Tele-Communications Programmers & Programmer Analysts		26,600	30,700	37,500	
Technical Writers and Editors	20,100	22,800	26,700	30,600	
EDP Auditors		23,800	30,100	38,200	
Senior Analysts, Project Leaders & Consultants			30,800	34,700*	39,100

* Salary for 4-6 years.

TABLE 99

MEDIAN SALARIES OF MANAGEMENT COMPUTER PROFESSIONALS BY POSITION AND SIZE OF COMPUTER SYSTEM, 1983

MANAGEMENT POSITION	SIZE OF COMPUTER SYSTEM		
	SMALL	MEDIUM	LARGE
Technical Services Managers	$38,200	$43,600	$49,000
Systems & Programming Managers	38,300	44,200	49,600
Operations Managers	27,100	34,400	40,500
Information Systems Directors	40,600	50,500	60,300

SOURCE: American Geological Institute, Salary Study of State Geological Surveys, 1982.

TABLE 100

SALARY RANGES OF STATE GEOLOGISTS BY LEVEL OF RESPONSIBILITY, 1982

LEVEL	SALARY RANGES		
	Low	High	Median
Geologist I (Jr. Scientist/Asst. Geologist)	$13,624	$35,292	$19,000
Geologist II (Asst. Scientist/Sr. Geologist)	14,846	40,452	21,400
Geologist III (Scientist/Principal Geologist)	15,808	46,212	25,000
Geologist IV (Sr. Geologist/Sr. Scientist)	19,781	52,896	29,500
Geologist V (Assoc. Chief/ Asst. State Geologist/Supervisor)	17,940	60,600	33,000
State Geologist/Director	21,000	77,760	44,400

SOURCE: U.S. Department of HHS, Public Health Service, Position Classification and Pay in State and Territorial Public Health Laboratories, January 1983.

TABLE 101

AVERAGE ANNUAL SALARIES FOR SELECTED POSITIONS IN STATE AND TERRITORIAL PUBLIC HEALTH LABORATORIES BY STATE, 1983

STATE	POSITION					
	Laboratory Aide I	Laboratory Technician I	Micro-Biologist I	Chemist I	Asst. Lab. Director	Lab Director
Alabama	$11,474	$13,506	$19,428	*	$35,093	$46,060
Alaska		18,336	30,506			57,282
Arizona		14,135		18,539		40,494
Arkansas	9,113	10,517	13,364	13,364	25,285	26,780
California	12,888	16,266	15,612	17,388	38,160	49,578
Colorado	11,820	15,840	17,934	21,798		42,000
Connecticut	11,379	13,166	14,960	14,960	37,315	45,400
Delaware	9,587	10,593	17,102	15,752		42,852
D.C.	10,271	15,263	19,554	17,655	41,062	48,817
Florida	8,227	11,390	15,013	15,921	28,104	31,500
Georgia	10,464	13,755	17,391	17,391	34,155	51,819
Hawaii	11,610	13,524	16,662			32,736
Idaho	10,325	11,943	16,004	16,004		38,534
Illinois	12,138	13,428	17,562	17,748		42,168
Indiana	10,621	12,012	16,718	16,718		42,848
Iowa	9,533	12,996	17,075	17,075	39,810	38,790
Kansas		10,800	18,918	18,918	35,676	43,728
Kentucky	8,844	11,850	17,502	17,502		51,852
Louisiana	9,822	12,312	18,276	18,276	26,658	43,608
Maine	10,941	12,594	15,943	16,619	26,541	28,777
Maryland		10,599	14,678	14,678	53,478	44,200
Massachusetts	10,701	11,098	15,321	15,321	35,073	37,837
Michigan		15,065	17,184	17,184	45,886	49,527
Minnesota	12,580	13,916			36,623	43,503
Mississippi	8,705	9,017	15,839		24,159	30,576
Missouri	8,988	12,426	15,120	15,120	25,392	30,396
Montana	12,087	14,968	17,380	17,380		28,659
Nebraska	9,395	11,671	16,754	16,754		29,880
Nevada	13,245	16,542				
New Hampshire	8,521	11,592	3,279			24,608
New Jersey	9,364	13,834	15,405	15,405		42,505
New Mexico	10,272		17,574	17,574	33,144	37,338
New York						
North Carolina	8,862	12,504	17,844	16,320	31,320	39,720
North Dakota	8,652	11,046	17,154	17,154	27,954	33,984
Ohio	11,492	13,229	16,182	16,182	28,714	31,605
Oklahoma	10,125	14,247	22,641			43,760
Oregon	10,680	13,968			25,650	34,788
Pennsylvania	11,540	14,210	19,726	19,726	33,359	39,570
Rhode Island	10,995	13,426		16,624	29,684	34,601
South Carolina	9,278	11,740	16,067	17,380	26,756	56,371
South Dakota	8,465	10,967	15,919	15,919		29,509
Tennessee	8,737	9,936		15,054	25,176	30,210
Texas	11,208	14,370	18,600	18,600	39,100	43,300
Utah	12,643	15,952	19,710	21,224		44,359
Vermont	10,046	12,739	16,348	16,348	23,316	33,040
Virginia	8,826	10,543	18,002	19,674	28,108	33,589
Washington	10,086	14,256	17,364	18,246		38,274
West Virginia	10,734		17,874	17,874	24,198	36,732
Wisconsin	14,272	13,966	18,844	18,844		41,800
Wyoming	12,510	17,670				41,370
Guam	9,322	10,528	14,840	14,840	19,910	22,640
Puerto Rico	5,484		9,180	9,420		21,360
Virgin Islands	7,003	9,847	11,137			21,569

NOTE: Blanks indicate no position reported.

SOURCE: U.S. Department of HHS, Public Health Service, Position Classification and Pay in State and Territorial Public Health Laboratories, January 1983.

TABLE 102

AVERAGE ANNUAL SALARIES OF SELECTED POSITIONS IN STATE AND TERRITORIAL PUBLIC HEALTH LABORATORIES, 1978 and 1983

POSITION CLASSIFICATION	AVERAGE ANNUAL SALARIES		% INCREASE
	1978	1983	1978-1983
Lab Aide I	$7,549	$10,339	37.0
Lab Aide II	8,447	11,570	37.0
Lab Technician I	9,408	13,053	38.7
Lab Technician II	10,829	14,900	37.6
Microbiologist I	12,599	17,083	35.6
Microbiologist II	14,400	19,527	35.6
Microbiologist III	16,805	22,508	33.9
Microbiologist IV	19,418	25,761	32.7
Microbiologist V	21.189	27,983	32.1
Chemist I	12,527	16,915	35.0
Chemist II	14,833	19,783	33.4
Chemist III	16,713	23,266	39.2
Chemist IV	19,384	25,062	29.3
Chemist V	22,025	29,236	32.7
Asst. Lab Director	22,817	31,732	39.1
Lab Director	28,519	38,753	35.9

SOURCE: D. Dietrich Associates, Inc., Laboratory Technician Salaries Survey 1982, June 1982.

TABLE 103

NUMBER, AVERAGE AND MEDIAN SALARIES OF LABORATORY AIDES AND TECHNICIANS BY TITLE*, MAY 1982

TITLE*	Number of Employees	Weighted Average Hourly Salary	Firm's Actual Median Salary
Laboratory Aide/Trainee	178	$5.34	$5.15
Laboratory Technician I	544	6.89	6.39
Laboratory Technician II	1,049	7.74	7.48
Laboratory Technician III	1,069	9.00	8.65
Laboratory Technician IV	986	10.33	9.72
Laboratory Technician V	584	11.30	11.53
Supervisory Laboratory Technician/Laboratory Technician VI	357	12.15	11.50

* See original survey for definition of Title by level of responsibility.

SOURCE: Abbott, Langer and Associates, The Accounting/Financial Report, Part I, 1983.

TABLE 104

MEAN AND MEDIAN ANNUAL SALARIES OF ACCOUNTING/FINANCIAL PERSONNEL* BY GEOGRAPHIC AREA AND POSITION, 1982

GEOGRAPHIC AREA	All Accountants		Sole Owners		Senior Partners		Partners		Accounting & Auditing Mgrs.		Supervisory Accnts/Auditors	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median
Northeastern States	$27,186	$20,000	$41,643	$36,500	$71,070	$50,000	$43,592	$43,000	$27,467	$27,000	$19,511	$19,000
Southern States	30,626	25,000	32,879	27,000	78,038	41,000	39,600	38,600	28,438	29,900	21,293	18,000
Chicago & Vicinity	37,474	28,800					41,950	44,250			29,693	31,020
Midwestern States (excl. Chicago area)	30,776	25,000	39,259	36,676	59,500	67,000	40,958	41,400	30,019	30,875	23,030	22,020
Midwestern States (incl. Chicago area)	32,192	25,500	43,990	40,000	67,933	67,000	41,214	41,400	29,981	31,000	23,918	23,500
Southwestern States	29,963	23,000	44,868	29,500	53,864	54,000	43,765	50,799	25,833	27,000	22,405	22,000
North Central States	30,515	24,750	30,800	30,000	59,708	48,000	43,648	39,000	26,868	27,700	21,618	23,085
Mountain States	22,732	22,000	28,600	20,800			44,857	48,000			19,822	18,200
Los Angeles & Vicinity	32,830	28,200			59,900	54,150	40,758	38,800			28,425	28,900
San Francisco & Vicinity	40,138	31,646			98,275	68,514	49,867	51,675	37,208	33,936	25,891	25,200
Pacific States (excl. L.A. & S.F. areas	27,158	22,700	44,767	39,957			28,029	22,500	41,394	38,000	24,630	25,600
Pacific State (incl. L.A. & S.F. areas)	32,079	26,000	46,372	41,000	72,789	58,000	40,157	38,400	39,007	36,750	25,925	26,500

* Employed in Public Accounting Firms.

TABLE 105

MEAN AND MEDIAN ANNUAL SALARIES OF ACCOUNTING/FINANCIAL PERSONNEL* BY LEVEL OF EDUCATION AND POSITION, 1982

LEVEL OF EDUCATION	All Accountants		Sole Owners		Senior Partners		Partners		Accounting & Auditing Mgrs.		Supervisory Accnts/Auditors	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median
Less than BA/BS/BBA	$22,089	$18,000	$32,436	$29,500	$	$	$36,818	$38,000	$24,257	$18,000	$18,135	$17,000
BA/BS/BBA Degree	30,361	24,000	40,348	36,000	70,110	62,650	42,511	42,000	30,660	29,900	23,202	22,940
MA/MS/MBA Degree	37,961	32,292	39,422	31,000	61,864	50,000	41,378	40,000	39,202	38,500	25,467	26,200

SOURCE: Abbott, Langer and Associates, The Accounting/Financial Report, Part II, 1983.

TABLE 106

MEAN AND MEDIAN ANNUAL SALARIES OF ACCOUNTING/FINANCIAL PERSONNEL* BY GEOGRAPHIC AREA AND POSITION, 1982

GEOGRAPHIC AREA	All Privately Employed Accountants		Chief, Financial Officers		Comptrollers		Accounting Auditing Managers		Supervisory Accountants & Auditors	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median
Boston & Vicinity	$29,190	$25,500	$	$	$	$	$29,843	$27,716	$23,380	$22,000
New York City & Vicinity	34,681	28,100	68,963	56,250			44,704	45,500	29,132	28,375
Philadelphia & Vicinity	32,656	27,420			48,528	44,000	29,981	29,638	27,443	27,960
Northeastern States (excluding metro areas surveyed	24,181	21,150	57,680	57,200	42,460	39,350	27,368	26,226	21,203	20,200
Northeastern States (including metro areas surveyed)	27,001	22,700	66,339	57,550	43,790	40,520	30,237	27,658	22,790	21,365
Washington, DC & Vicinity	32,602	28,210					38,701	38,600	29,281	29,696
Southern States (excluding Washington, DC area)	27,121	24,000	58,791	51,700	40,486	40,482	31,899	32,032	21,806	19,675
Southern States (including Washington, DC area)	27,770	24,360	59,665	54,050	41,745	41,000	32,415	32,750	22,636	20,600
Chicago & Vicinity	31,488	26,000	67,593	58,700	53,826	48,150	34,544	32,000	25,653	24,760
Midwestern States (excluding Chicago area)	29,742	26,700	59,253	57,000	40,332	39,791	30,547	29,596	26,956	25,823
Midwestern States (including Chicago area)	30,185	26,450	61,139	57,250	43,706	40,939	31,722	30,000	26,762	25,690
Dallas/Ft. Worth & Vicinity	29,283	26,750					38,104	39,500	26,626	26,711
Southwestern States (excluding Dallas/Ft. Worth area)	31,264	25,710	73,893	60,000	47,722	38,000	32,307	30,000	25,595	24,500
Southwestern States (including Dallas/Ft. Worth area)	30,474	26,200	70,480	62,500	46,231	38,00	33,868	35,000	26,067	25,000
North Central States	30,223	28,000	71,420	61,800	44,903	43,90	35,463	35,675	25,655	24,000
Mountain States	29,464	27,530	47,852	44,000	35,761	36,000	30,007	30,500	24,866	24,523
Los Angeles & Vicinity	27,705	23,610	63,017	70,450	41,800	44,000	32,311	32,450	26,342	26,500
San Francisco & Vicinity	30,194	27,900	56,617	58,250	47,617	46,650	32,881	32,500	21,733	21,300
Pacific States (excluding metro areas surveyed)	28,552	24,850	52,498	57,500	50,014	53,270	36,109	36,000	24,740	24,700
Pacific States (including metro areas surveyed)	28,689	25,000	56,316	59,000	47,095	48,300	34,373	33,625	24,355	24,300
All Areas	28,948	25,163	61,750	57,500	43,702	40,900	32,537	31,400	24,688	24,000

* Employed in Industry, Government, Education or Non-Profit Organizations.

SOURCE: Abbott, Langer and Associates, The Accounting/Financial Report, Part II, 1983.

TABLE 107

MEAN AND MEDIAN ANNUAL SALARIES OF ACCOUNTING/FINANCIAL PERSONNEL* BY LEVEL OF EDUCATION AND POSITION, 1982

LEVEL OF EDUCATION	All Privately Employed Accountants		Chief Financial Officers		Comptrollers		Accounting & Auditing Managers		Supervisory Accountants & Auditors	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median
Less than BA/BS/BBA	$23,841	$22,297	$68,374	$41,202	$37,183	$34,840	$26,921	$25,000	$23,701	$23,400
BA/BS/BBA Degree	27,662	24,600	55,048	53,050	43,419	40,300	32,096	30,500	24,707	23,800
MA/MS Degree	37,653	34,000	61,165	57,500	48,501	45,000	37,097	35,850	26,379	24,523
MBA Degree	44,290	39,540	66,909	61,620	44,814	44,385	38,145	38,450	29,663	29,500

* Employed in Industry, Government, Education or Non-profit Organizations.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, "Earnings of Workers and their Families: First Quarter 1983," USDL 83-201

TABLE 108

NUMBER AND MEDIAN WEEKLY EARNINGS BY SEX FOR SELECTED OCCUPATIONS, FIRST QUARTER 1983

OCCUPATION	TOTAL		MEN		WOMEN	
	Number of Workers	Median Weekly Earnings	Number of Workers	Median Weekly Earnings	Number of Workers	Median Weekly Earnings
MANAGERIAL & PROFESSIONAL	17,264,000	$438	10,311,000	$534	6,954,000	$352
Executive, Administrative & Managerial	8,065,000	457	5,418,000	552	2,647,000	334
Professional	9,199,000	428	4,893,000	517	4,307,000	366
TECHNICAL, SALES & ADMINIS. SUPPORT	20,919,000	284	7,659,000	394	13,260,000	246
Technicians & Related Support	2,627,000	346	1,374,000	418	1,253,000	301
Sales Occupations	5,986,000	312	3,631,000	397	2,354,000	209
Administrative Support, Including Clerical	12,306,000	263	2,654,000	375	9,652,000	247

SALARIES OF ENGINEERS

Weighted average salaries for supervisory and and non-supervisory engineers are shown in Chart 5.

• Engineers' salaries increased 7.7% from 1981 to 1982, according to the 16th survey by the **Engineering Manpower Commission** of the **American Association of Engineering Societies.** Salaries paid to newly employed engineers with less than one year of experience increased 10.1%. Nearly 1,000 organizations participated in the 1982 salary survey and reported salaries of approximately 135,000 engineers.

Engineers in supervisory positions enjoy higher earnings than non-supervisors. The largest salary differential is in petroleum (62%) and the smallest is in state government (30%) as has been true in previous surveys (Table 109). Regardless of supervisory status, engineers employed by petroleum companies earned the highest median and average incomes in 1982, while those engineers employed by state governments earned the lowest incomes (Table 110).

Engineers' salaries are not uniform thoughout the U.S. Engineers working in the Pacific region reported the highest salaries, while those working in the west north central reported the lowest (Tables 111 and 114).

By type of industry, engineers working in the petroleum industry command the highest salaries throughout their working career, while those working in the instruments industry report the lowest salaries (Table 112). By type of employer, those engineers working in research and development firms report the highest median salaries, followed by those in industry and in education administration. Engineers working in state government again earn the least (Table 113).

It is apparent that those engineers possessing a higher degree earn higher salaries. Overall, median salaries paid to Ph.D. engineers were 19.1% higher than those paid to master's degree engineers while the median salary paid to master's degree engineers was 13.8% higher than that paid to bachelor's degree holders (Table 115).

• Salaries compiled by the **American Mining Congress** show that although metallurgical engineers have slightly higher salaries than mining engineers, after five years of experience, mining engineers have moved ahead. Geologists start and remain behind these engineering specialists (Table 116).

• The 17th national compensation survey by the **National Society of Professional Engineers - PROFESSIONAL ENGINEERS INCOME AND SALARY SURVEY 1983 -** reports that median income for NSPE members reached $41,300 in January 1983 - up 5.9% from the 1982 survey, and the second year in a row in which members' salaries outgained the Consumer Price Index.

By degree level, the 62% of respondents reporting a bachelor's degree in engineering had a median salary of $40,000, up 14% since 1981, while those with a M.S. in engineering had a median of $42,500, and those with a doctorate, $49,960 (Table 117). Regardless of degree level, median income increases with engineering experience as shown in Table 120.

As in other surveys, the highest paid discipline was petroleum and mining engineering, with a median income of $52,500, followed by chemical engineering at

$46,800, and architectural engineering at $43,350. Civil engineers engaged primarily in surveying had the lowest median income - $36,000 (Table 118). Median income of engineers by discipline and length of experience is shown in Table 121.

As in previous surveys, the highest-paying job function was the executive/administrative category, with a median of $50,000. Second-highest was sales/marketing ($42,400), followed by research and development ($41,040). Lowest paid job function was design ($35,700) (Table 123). Regardless of length of experience, those engineers working in executive/administrative areas report the highest median incomes (Table 119).

Top-paying industries were those concerned with petroleum and coal products at a median of $48,500, followed by construction and real estate development at $47,500. Government salaries continue to be lowest, with federally-employed NSPE members at $38,476 showing almost no gain from last year's $38,000. State and local government employees continued to trail all other categories at $35,000 and $35,700 respectively (Table 122).

Primarily reflecting big-city differentials, top salaries were reported in the Northeast, where the median of $43,600 edged out the Southwest at $43,057, last year's leading region. Lowest salaries were reported in the Great Plain states (Table 124). In major metropolitan areas, the highest-paid members lived in the San Francisco/Oakland vicinity, with a median of $50,000, followed by last year's leader, Houston at $49,500, and New York City at $48,500. Lowest reported salaries for major metropolitan areas were Cincinnati and Cleveland at $37,502 and $38,268 respectively (Table 125).

• The 18th semi-annual Fall 1982 survey by **D. Dietrich Associates, Inc.** reports data from 286 firms and covers information on 42,349 engineers. The **FALL 1982 ENGINEERING SALARIES SURVEY** reports an average salary for all participants of $35,273 per year. As expected, as level of responsibility increases (i.e. title), so does salary as shown in Table 126.

Overall, engineers employed in the West reported an average salary of $42,696, while those employed in the Midwest/central area had average salaries of $35,362 (Table 127). However, at various levels of responsibility, the salary data show geographic variances.

• Chemical engineers reported the highest entry-level salaries ($27,400), while metallurgical engineers reported the lowest ($23,500), according to the **1982 HAY ENGINEERING COMPARISON.** However, in management, electrical engineers reported the highest salary ($47,000), while nuclear engineers reported the lowest ($38,500) (Table 128).

Entry-level engineers working in manufacturing or the nuclear industry reported the lowest salaries ($24,200), while those working in the chemical-petroleum industry reported the highest ($28,600). Engineers working in management in the consumer industry and utilities reported the highest salaries ($47,500), while those working in management in heavy manufacturing industries reported the lowest - $39,900 (Table 129).

Entry-level engineers working in the New England area reported the lowest salaries ($23,000), while those working in the Southwest reported the highest ($27,200) (Table 130).

• Average compensation for industrial engineers on January 1, 1983 was $38,397, according to the eighth survey conducted by **Abbott, Langer and Associates** for the **American Institute of Industrial Engineers.** Median income varied considerably from one type of employer to another. Median incomes in non-manufacturing organizations were considerably higher ($37,000) than in manufacturing firms ($33,300). The lowest median incomes were found in firms manufacturing apparel and other textile products ($30,000), and in furniture & wood products ($30,150). IIE members whose median incomes were highest were employed by consulting firms, both non-engineering ($45,000) and engineering firms ($42,000) (Table 131).

Median income was marginally highest in the San Francisco/Oakland metropolitan area ($40,080), followed closely by the Washington/Baltimore area ($40,000). The lowest median incomes were found in St Louis ($31,150), Seattle/Everett ($31,250), and Pittsburgh ($32,760) (Table 132).

As could be anticipated, the income of IIE engineers varied according to degree level. Those with less than a bachelor's degree averaged $31,802; those with the doctorate, $47,381 (Table 133).

The total income of industrial engineers rose fairly regularly by length of experience, with a median income of $25,200 for those with under one year of experience and $44,000 for those with over 25 years of experience (Table 134). The median income was highest for industrial engineers who were corporate officers or in general management ($52,500). Consultants and those who were department heads or in functional management were next - both at $40,000 (Table 135).

By primary activity or specialty, the highest median income went to those engaged in "operations supervision, assembly, clerical, office" ($40,000), followed by those in "organization, administration - IE department, plant," ($39,686). At the other end of the salary spectrum were IIE members engaged in work measurement, standards, and performance measures at $29,225 (Table 136).

• In another survey by **Abbott, Langer & Associates** on **COMPENSATION IN MANUFACTURING (ENGINEERS AND MANAGERS)**, prepared for the **Society of Manufacturing Engineers**, engineers reported a median annual income of $29,400, up 17.6% since the previous survey nearly 20 months earlier. Managerial personnel in manufacturing reported a median income of $38,400, up 14.3% in the same period. Naturally, length of experience played a significant part in determining income. Total median compensation for engineers ranged from $25,500 for those with less than five years of experience to $31,160 for those with 30 years or more of experience (Table 137).

Engineers working in manufacturing who had their degree in electrical engineering reported the highest median salary ($31,700), while those who earned their degree in a field other than engineering reported the lowest ($27,223) (Table 138).

Engineers working in the transportation equipment industry reported the highest median income ($32,013), while those working for manufacturers of instruments, controls & related products earned the least ($27,500) (Table 139).

Level of education had a slightly greater effect upon the income of managers in manufacturing than it did on the income of engineers in manufacturing. Median base salaries of engineers ranged from $26,500 for those with only an engineering technician degree to $32,625 for those with a graduate degree (Table 140). Similar information for managers is shown in Table 142.

As was true in other surveys, income varied significantly by geographic area - as much as 38.3% for engineers. The highest median incomes were found in San Francisco/Oakland area ($35,145), followed by Seattle/Everett ($32,850) and Detroit ($32,000). The lowest median compensation for engineers was found in the Philadelphia area ($25,425) (Table 141).

• The median annual income of engineers who are members of the **Institute of Electrical and Electronics Engineers** was $40,000 as of February 1, 1983. This represents an increase of 15.9% since the preceding survey in 1981, compared to an increase in the Consumer Price Index of 18.4%. The median income of IEEE engineers with no college was higher than all higher categories up to master's degree level. Not surprisingly, doctoral degree respondents had the highest median income ($48,225) while lowest median income was for bachelor's level technologists ($30,500) (Table 143).

The median income of IEEE respondents working in their areas of primary technical competence showed a consistent increase with increased experience (Table 144). Income ranged from $27,114 for those with under one year of experience to $50,203 for those with 28-29 years of experience .

Not surprisingly, male members of the IEEE reported considerably higher incomes than did female members - $42,250 compared to $32,275. Although American Indians/Alaskan Natives reported the highest income ($43,000), there were only nine respondents. Hispanic IEEE members reported the lowest income - $37,800 (Table 145).

Table 146 shows rising income versus rising level of professional responsibility for those employed full-time in their area of primary technical competence.

IEEE members employed in petroleum and related products industries had the highest median income ($48,000), followed by those in consulting ($47,000). Those receiving the lowest median incomes were employed in printing and allied products ($32,300) and state government ($32,904) Table 147).

Income by primary technical specialty is reported in Table 148. The highest median income was received by those in engineering management ($50,848) followed by those in data banks and electronic surveillance ($50,000). Lowest income was reported by engineering writers ($30,000) and transportation ($32,210).

Los Angeles/San Diego and vicinity provided the highest median income ($46,700), followed by New York City and vicinity ($46,100). Lowest median income was reported in the Southeastern states, excluding Florida, Atlanta/Huntsville and vicinity ($37,878) (Table 149).

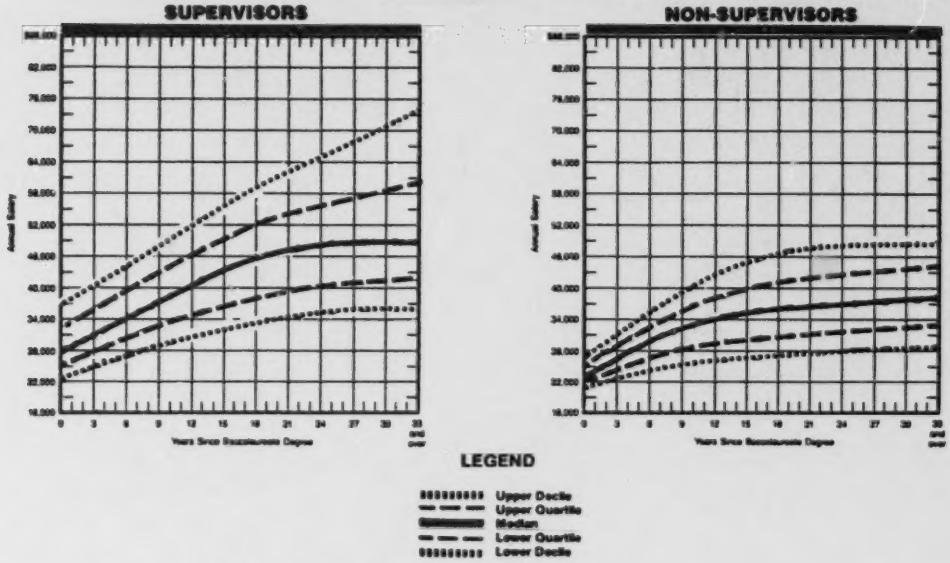
General and corporate managers were again reported as having the highest median income ($60,000) followed by consultants ($49,500) and basic researchers ($44,800). Engineering support which includes draftsmen, laboratory assistants, and technicians, reported the lowest median income - $25,524 (Table 150).

• The **Washington Section** of the **Institute of Electrical and Electronics Engineers** collected data from 19 employers representing over 3,500 engineering employees in private industry and the government in the Washington, D.C. area. The weighted average salary of D.C. area engineers and scientists by grade level and corresponding G.S. levels is shown in Table 151.

SOURCE: Engineering Manpower Commission of American Association of Engineering Societies, Professional Income of Engineers, 1982.

Chart 5

WEIGHTED NATIONAL AVERAGE SALARIES OF SUPERVISORY AND NON-SUPERVISORY ENGINEERS, 1982



SOURCE: Engineering Manpower Commission of American Association of Engineering Societies, Engineering Manpower Bulletin, No. 62, October 1982.

TABLE 109

MEDIAN SALARIES OF ENGINEERS BY TYPE OF EMPLOYMENT GROUP AND SUPERVISORY STATUS, 1982

EMPLOYMENT GROUP	Supervisor	Non-Supervisor	Percent Differential
Research and Development	$51,800	$36,000	44%
Petroleum	57,250	35,400	62
Aerospace	43,000	30,850	39
Chemicals	48,550	34,050	43
Electric Equipment	37,600	28,500	32
Electronic Equipment	46,400	32,000	45
Local Government	39,700	29,700	34
State Government	31,450	24,150	30
Federal Government	36,600	25,950	41
Construction	38,800	26,850	45
Mining	42,400	30,150	41
Utilities and Services	41,750	30,800	36
Design, Consulting & Engineering Services	45,000	30,400	48
Mechanical Industry	41,550	31,650	31
Metals Industries	40,100	28,350	41

SOURCE: Engineering Manpower Commission of American Association of Engineering Societies, Engineering Manpower Bulletin, No. 57, November 1981, and No. 62, October 1982.

TABLE 110

MEDIAN AND MEAN SALARIES OF ENGINEERS BY TYPE OF EMPLOYMENT GROUP, 1981 AND 1982

EMPLOYMENT GROUP	MEDIAN		MEAN	
	1981	1982	1981	1982
Research and Development	$36,050	$39,100	$37,150	$40,700
Petroleum	39,200	41,850	41,850	45,750
Aerospace	31,550	33,900	32,650	34,950
Chemicals	35,400	38,750	37,100	40,850
Electric Equipment	30,300	31,300	32,200	33,150
Electronic Equipment	32,000	34,600	33,300	36,200
Local Government	28,100	33,150	29,700	34,350
State Government	26,700	28,150	26,950	29,050
Federal Government	31,600	30,000	31,800	31,800
Construction	31,750	30,700	32,600	33,350
Mining	35,050	37,300	36,550	41,700
Design, Consulting & Engineering Services	29,300	33,750	29,950	35,650
Mechanical Industry	31,400	34,600	32,650	36,850
Metals Industries	28,900	31,600	30,600	33,550

TABLE 111

MEDIAN AND MEAN SALARIES OF ENGINEERS* BY GEOGRAPHICAL REGION, 1981 AND 1982

GEOGRAPHICAL REGION	MEDIAN		MEAN	
	1981	1982	1981	1982
Pacific	$35,850	$40,450	$36,000	$40,750
Middle Atlantic	34,050	36,400	35,650	38,550
Mountain	33,250	36,400	34,400	37,650
New England	30,550	32,300	31,850	33,950
East North Central	30,650	33,150	32,750	35,800
West North Central	31,200	31,550	32,850	33,350
East South Central	30,900	33,750	32,000	34,800
West South Central	30,400	33,250	32,500	36,250
South Atlantic	29,300	38,800	31,250	41,050

*Includes only engineers employed in industry or government.

SOURCE: Engineering Manpower Commission of American Association of Engineering Societies, 1982 Engineers' Salaries.

TABLE 112

NUMBER AND MEDIAN ANNUAL SALARIES OF ENGINEERS BY TYPE OF INDUSTRY AND SELECTED YEARS SINCE BACCALAUREATE, 1982

TYPE OF INDUSTRY	YEARS SINCE BACCALAUREATE									
	0	1	5	7	9-11	15-17	18-20	21-23	27-29	33+
Aerospace	(167) $23,450	(217) $24,600	(77) $29,250	(94) $31,500	(215) $34,550	(219) $38,750	(212) $39,750	(219) $40,150	(188) $39,550	(154) $37,600
Chemicals	(438) 25,550	(495) 26,650	(256) 31,250	(296) 33,600	(586) 37,100	(582) 43,300	(458) 45,650	(444) 47,450	(463) 49,300	(803) 49,150
Construction	(195) 22,100	(154) 23,150	(62) 27,250	(108) 29,250	(177) 32,050	(156) 36,800	(98) 38,600	(108) 40,000	(93) 41,850	(94) 42,850
Electrical Equipment	(33) 22,800	(28) 23,500	(24) 26,350	(19) 27,750	(109) 29,750	(79) 33,100	(73) 34,300	(85) 35,150	(53) 35,800	(90) 34,550
Electronic Equipment	(1,179) 24,600	(1,503) 25,650	(773) 29,800	(662) 31,850	(2,060) 34,700	(1,776) 39,250	(1,438) 40,750	(1,625) 41,800	(1,256) 42,650	(1,071) 42,350
Instruments	(19) 22,050	(17) 23,250	(7) 28,000	(12) 30,250	(32) 33,100	(23) 36,450	(17) 36,850	(20) 36,650	(23) 35,250	(27) 32,900
Machinery	(96) 25,650	(152) 26,450	(136) 29,700	(144) 31,400	(382) 33,900	(450) 38,550	(282) 40,450	(297) 41,850	(200) 43,000	(397) 39,550
Mechanical	(115) 24,950	(169) 25,800	(143) 29,400	(156) 31,200	(414) 33,850	(473) 38,500	(299) 40,200	(317) 41,400	(223) 42,000	(424) 39,150
Metals, Basic	(0)	(3)	(5) 29,300	(4)	(16) 33,850	(9) 39,300	(29) 41,700	(13) 43,650	(17) 45,700	(32) 41,750
Metal Products Fabricated	(220) 23,050	(265) 24,000	(157) 27,700	(174) 29,500	(456) 32,000	(345) 35,950	(275) 37,200	(232) 37,950	(222) 38,200	(348) 36,950
Mining	(8) 25,700	(10) 26,900	(3)	(8) 34,750	(24) 38,850	(12) 46,700	(5) 50,200	(7) 53,300	(4)	(12) 61,750
Paper & Wood	(32) 25,000	(28) 26,050	(23) 30,400	(22) 32,500	(48) 35,600	(26) 41,000	(34) 43,200	(28) 45,000	(28) 47,550	(42) 49,050
Petroleum	(201) 29,400	(197) 31,100	(95) 37,950	(111) 41,250	(192) 45,900	(116) 53,400	(99) 56,100	(93) 58,150	(96) 60,550	(154) 61,650
Food	(9) 24,500	(9) 25,400	(17) 29,250	(9) 31,350	(44) 34,550	(24) 40,750	(23) 43,300	(22) 45,100	(13) 45,800	(25) 37,750
Design, Consult & Engineering Services	(372) 23,550	(395) 24,700	(353) 29,250	(399) 31,350	(1,070) 34,250	(714) 38,550	(512) 40,050	(443) 41,100	(346) 42,300	(575) 42,950
Electric Utilities	(623) 24,000	(691) 25,100	(468) 29,600	(551) 31,700	(1,690) 34,650	(829) 39,200	(618) 40,850	(605) 42,050	(434) 43,550	(785) 44,400
Gas Utilities	(64) 25,950	(65) 26,950	(57) 31,150	(75) 33,200	(209) 36,100	(108) 40,500	(84) 41,800	(70) 42,450	(53) 42,250	(152) 39,750
Communications Services	(387) 24,650	(646) 25,950	(246) 31,300	(251) 34,000	(799) 37,850	(709) 43,750	(624) 45,450	(609) 46,250	(292) 45,900	(268) 43,250

NOTE: Blanks indicate no median salaries computed for fewer than 5 respondents.

SOURCE: Engineering Manpower Commission of American Association of Engineering Societies, 1982 Engineers' Salaries, 1982 Professional Income of Engineers, and 1982 Salaries of Engineers in Education.

TABLE 113

NUMBER AND MEDIAN ANNUAL SALARIES OF ENGINEERS BY TYPE OF EMPLOYMENT GROUP AND SELECTED YEARS SINCE BACCALAUREATE, 1982

EMPLOYMENT GROUP	YEARS SINCE BACCALAUREATE									
	0	1	5	7	9-11	15-17	18-20	21-23	27-29	33+
All Industry	(4,618) $24,300	(5,526) $25,450	(3,257) $30,000	(3,520) $32,200	(9,595) $35,250	(7,678) $40,000	(6,329) $41,500	(6,438) $42,550	(4,771) $43,450	(6,505) $43,400
All Manufacturing Industries	(2,713) 24,500	(3,243) 25,550	(1,758) 29,750	(1,760) 31,850	(4,650) 34,700	(4,062) 39,250	(3,277) 40,800	(3,425) 41,800	(2,789) 42,600	(3,631) 42,250
All Non-Manufacturing Industries	(1,905) 24,250	(2,283) 25,400	(1,499) 30,100	(1,760) 32,450	(4,945) 35,650	(3,616) 40,750	(3,052) 42,450	(3,013) 43,600	(1,982) 44,650	(2,874) 44,650
Federal Government	(198) 17,800	(303) 20,400	(195) 28,250	(162) 30,450	(436) 32,250	(476) 33,400	(658) 33,550	(906) 33,600	(239) 33,600	(128) 33,600
State Government	(30) 19,650	(59) 20,350	(64) 23,100	(93) 24,500	(292) 26,500	(183) 30,100	(170) 31,450	(257) 32,400	(125) 33,300	(116) 32,200
Local Government	(26) 24,550	(10) 25,650	(12) 29,350	(21) 30,800	(39) 32,550	(56) 34,650	(63) 35,250	(67) 35,600	(58) 36,000	(69) 36,100
All Education All Administrators*	(1)	(1)	(1)	(3)	(6) 32,050	(73) 41,800	(122) 44,800	(186) 46,500	(135) 47,450	(218) 47,150
All Education All Researchers*	(11) 18,300	(31) 18,800	(58) 20,900	(65) 22,000	(194) 23,700	(127) 27,200	(86) 28,900	(69) 30,450	(67) 32,900	(100) 33,500
Research and Development	(610) 24,600	(920) 25,950	(513) 31,400	(588) 34,050	(1,642) 37,750	(1,675) 43,400	(1,612) 45,200	(1,630) 46,350	(951) 47,350	(1,105) 47,400
Consulting	(292) 23,400	(344) 24,600	(323) 29,250	(367) 31,450	(950) 34,400	(648) 38,850	(463) 40,400	(391) 41,550	(298) 42,900	(494) 43,600

* 12-month contract.

NOTE: Blanks indicate no median salaries computed for fewer than 5 respondents.

SOURCE: Engineering Manpower Commission of American Association of Engineering Societies, 1982 Engineers' Salaries and 1982 Professional Income of Engineers.

TABLE 114

NUMBER AND MEDIAN ANNUAL SALARIES OF ENGINEERS BY GEOGRAPHIC AREA AND SELECTED YEARS SINCE BACCALAUREATE, 1982*

GEOGRAPHIC AREA	YEARS SINCE BACCALAUREATE									
	0	1	5	7	9-11	15-17	18-20	21-23	27-29	33+
New England	(226) $21,900	(284) $23,100	(150) $28,000	(169) $30,300	(549) $33,400	(353) $37,700	(310) $38,900	(268) $39,550	(212) $39,900	(232) $39,650
Middle Atlantic	(924) 24,300	(1,175) 25,700	(586) 31,050	(664) 33,500	(2,020) 36,700	(1,574) 41,300	(1,344) 42,750	(1,381) 43,750	(919) 44,800	(1,103) 45,200
East North Central	(707) 23,950	(718) 25,050	(529) 29,200	(597) 31,150	(1,648) 33,750	(1,139) 37,700	(882) 39,050	(757) 40,100	(619) 41,350	(1,017) 41,950
West North Central	(347) 24,200	(427) 25,100	(248) 28,800	(279) 30,550	(640) 32,950	(386) 36,550	(374) 37,750	(331) 38,600	(170) 39,400	(241) 39,600
South Atlantic	(4)	(15) 28,750	(32) 31,950	(58) 33,500	(233) 35,800	(220) 39,850	(163) 41,400	(166) 42,500	(120) 43,400	(157) 41,150
East South Central	(144) 23,800	(162) 24,950	(138) 29,350	(161) 31,200	(344) 33,500	(312) 36,300	(256) 36,950	(264) 37,350	(198) 37,550	(452) 37,550
West South Central	(706) 25,200	(935) 26,400	(456) 31,200	(372) 33,400	(928) 36,450	(602) 41,150	(470) 42,800	(464) 44,050	(280) 45,600	(434) 46,400
Mountain	(83) 24,400	(147) 25,600	(102) 30,600	(104) 33,050	(294) 36,550	(250) 41,650	(228) 43,000	(290) 43,450	(172) 42,600	(175) 39,200
Pacific Coast	(164) 24,600	(201) 25,750	(202) 30,450	(276) 32,800	(683) 36,200	(803) 41,750	(857) 43,650	(898) 45,000	(554) 46,100	(717) 45,750

* Includes only engineers employed in industry and in government.

NOTE: Blanks indicate no median salaries computed for fewer than 5 respondents.

SOURCE: Engineering Manpower Commission of American Association of Engineering Societies, Engineers' Salaries: Special Industry Report, 1982.

TABLE 115

NUMBER AND MEDIAN ANNUAL SALARIES OF ENGINEERS BY HIGHEST DEGREE AND SELECTED YEARS SINCE BACCALAUREATE, 1982 (WEIGHTED NATIONAL AVERAGE)

HIGHEST DEGREE	YEARS SINCE BACCALAUREATE							
	1	5	7	9-11	15-17	21-23	27-29	33+
B. S.	(18,676) $24,900	(8,936) $28,800	(8,650) $30,600	(22,870) $33,100	(18,081) $36,950	(19,193) $39,450	(14,352) $40,800	(18,574) $41,500
M. S.	(1)	(3,507) 31,150	(3,878) 33,200	(10,513) 36,200	(8,905) 41,200	(6,324) 44,300	(3,632) 45,500	(4,107) 45,000
Ph.D.	(5)	(340) 35,800	(776) 37,500	(2,698) 40,050	(3,559) 45,050	(2,126) 49,450	(874) 52,350	(873) 52,100
All Levels	(21,903) 25,250	(12,784) 29,700	(13,305) 31,850	(36,083) 34,700	(30,546) 39,050	(27,644) 41,350	(18,859) 42,200	(23,555) 42,400

NOTE: Blanks indicate no median salaries computed for fewer than 5 respondents.

SOURCE: American Mining Congress Journal, Vol. 69, No. 15, August 10, 1983.

TABLE 116

1983 SALARIES IN THE MINING INDUSTRY BY DISCIPLINE AND EXPERIENCE

DISCIPLINE	Starting	5-10 Yrs. Experience
Mining Engineering	$25,203	$36,256
Metallurgical Engineering	25,252	34,681
Geology	23,133	33,705

SOURCE: National Society of Professional Engineers, Professional Engineers' Income and Salary Survey, 1983.

TABLE 117

MEDIAN INCOME OF PROFESSIONAL ENGINEERS BY LEVEL OF EDUCATION, 1979-83

LEVEL OF EDUCATION	MEDIAN INCOME			PERCENT INCREASE	
	1979	1981	1983	1979-81	1981-83
Less than BA/BS Degree	$31,000	$35,000	$40,000	12%	14%
B.A. Degree	36,000	40,000	46,000	11	15
B.S. Degree (Non-Engineering)	31,787	36,150	40,000	13	10
B.S. Degree (Engineering)	31,000	34,884	40,000	12	14
MA/MS Degree (not MBA or Engineering)	33,000	37,000	42,550	12	15
MBA Degree	33,400	38,500	43,260	15	12
M.S. Degree in Engineering	32,000	36,000	42,500	12	18
Doctorate	37,404	41,500	49,960	10	20

TABLE 118

MEDIAN INCOME OF PROFESSIONAL ENGINEERS BY BRANCH OF ENGINEERING, 1979-83

BRANCH OF ENGINEERING	MEDIAN INCOME			PERCENT INCREASE	
	1979	1981	1983	1979-81	1981-83
Aeronautical and Aerospace	$33,834	$36,400	$42,125	8%	15%
Agricultural	28,163	34,469	38,470	22	11
Architectural			43,350		
Chemical	35,000	39,150	46,800	12	19
Civil (General)	30,160	33,682	38,845	12	15
Civil (Primarily Structural)			41,000		
Civil (Primarily Surveying)			36,000		
Cost/Value			39,850		
Electrical & Electronic	31,512	36,000	42,290	14	17
Industrial	32,000	35,660	41,500	11	16
Manufacturing			42,000		
Mechanical	32,000	36,566	43,000	14	17
Metallurgical & Materials	30,000	35,000	42,653	16	21
Nuclear	34,208	38,000	43,000	11	13
Petroleum & Mining	38,000	44,550	52,500	17	17
Safety			40,516		
Sanitary	30,500	33,389	39,000	9	16

SOURCE: National Society of Professional Engineers, Professional Engineers' Income and Salary Survey, 1983.

TABLE 119

MEDIAN INCOME OF PROFESSIONAL ENGINEERS BY JOB FUNCTION AND LENGTH OF EXPERIENCE, 1983

LENGTH OF EXPERIENCE	Construction/ Supervision	Project Study & Analysis	Design	Executive/ Administrative	Production Quality Control, Maintenance	Research and Development	Sales/ Marketing	Teaching/ Training
Under 1 Yr.	$24,524	$26,000	$25,833	$34,800	$27,538	$26,780	$	$
1 Yr.	25,525	28,000	25,000	39,689	26,610	30,200	24,010	
2 Yrs.	25,075	27,400	25,500	31,500	27,720	29,700	27,718	
3 Yrs.	27,050	28,300	27,625	32,120	30,400	28,000	27,600	
4 Yrs.	29,500	30,000	27,742	31,250	31,250	31,000	28,700	
5-9 Yrs.	33,000	33,290	31,800	37,800	33,997	33,050	36,500	33,750
10-14 Yrs.	37,206	38,340	36,000	42,600	37,501	40,920	42,000	32,000
15-19 Yrs.	42,758	40,900	39,624	48,042	41,000	42,000	46,425	37,938
20-24 Yrs.	40,256	42,000	42,000	51,500	41,200	45,703	47,350	38,280
25-29 Yrs.	41,300	45,000	42,000	51,900	41,575	45,553	48,000	40,000
30 Yrs. or More	42,809	45,000	42,589	57,143	42,875	47,000	50,000	42,733

TABLE 120

MEDIAN INCOME OF PROFESSIONAL ENGINEERS BY LEVEL OF EDUCATION AND LENGTH OF EXPERIENCE, 1983

LENGTH OF EXPERIENCE	Less than Bachelor's Degree	B.S. in Engineering	M.S. in Engineering	Doctorate
Under 1 Yr.	$	$25,220	$29,000	$
1 Yr.		25,600	29,098	40,174
2 Yrs.		26,700	28,178	
3 Yrs.		28,080	30,000	31,500
4 Yrs.		28,800	30,295	36,300
5-9 Yrs.	33,000	32,896	34,404	37,750
10-14 Yrs.	36,000	38,000	39,952	45,308
15-19 Yrs.	39,735	42,217	45,000	47,000
20-24 Yrs.	40,005	45,706	46,863	53,000
25-29 Yrs.	42,420	46,064	48,100	51,500
30 Yrs. or More	43,781	50,000	52,000	54,000

SOURCE: National Society of Professional Engineers, Professional Engineers' Income and Salary Survey, 1983.

TABLE 121

MEDIAN INCOME OF PROFESSIONAL ENGINEERS BY BRANCH OF ENGINEERING AND LENGTH OF EXPERIENCE, 1983

BRANCH OF ENGINEERING	Under 1 Yr.	1 Yr.	2 Yrs.	3 Yrs.	4 Yrs.	5-9 Yrs.	10-14 Yrs.	15-19 Yrs.	20-24 Yrs.	25-29 Yrs.	30 Yrs. or More
Aeronautical & Aerospace	$	$	$ 27,178	$ 27,700	$	$ 31,564	$ 39,572	$ 40,546	$ 43,992	$ 49,400	$ 46,068
Agriculture				24,390		30,114	37,500	40,650	43,900	42,780	47,990
Architectural					30,353	33,881	39,600	47,800	50,375	45,200	48,650
Chemical	28,200	30,240	30,500	30,000	33,920	37,800	41,630	51,000	52,800	49,920	54,875
Civil (General)	23,133	24,959	24,000	25,920	27,264	31,500	36,618	40,000	43,000	44,666	47,542
Civil (Primarily Structural)	25,225	23,802	24,096	26,616	28,200	32,000	37,721	43,300	48,179	47,749	50,200
Civil (Primarily Surveying)					24,500	33,995	36,000	36,005	42,018	35,300	49,000
Cost/Value						32,200	39,500	45,000	50,000		39,700
Electrical & Electronic	26,580	26,940	27,439	29,975	31,350	34,880	40,000	44,688	47,950	46,500	50,000
Industrial	24,875	24,941	28,028	32,400	32,000	37,500	38,400	42,475	46,293	51,000	53,100
Manufacturing					31,200	33,100	37,248	48,000	49,740	46,524	52,000
Mechanical	26,330	27,060	27,000	28,830	30,413	34,440	40,000	44,321	46,500	48,000	50,517
Metallurgical & Materials						38,210	47,125	49,200	41,000	48,000	45,000
Nuclear			26,918	29,700	33,200	37,379	42,948	50,350	50,500	46,625	53,950
Petroleum & Mining		49,400	32,810	38,790	37,313	42,320	52,000	56,350	61,500	62,710	80,180
Safety						32,581	32,407	36,200	59,500	46,500	45,719
Sanitary	20,280		25,000	27,662	26,500	32,440	37,790	45,000	46,000	47,935	51,800

SOURCE: National Society of Professional Engineers, Professional Engineers' Income and Salary Survey, 1983.

TABLE 122

NUMBER REPORTED, MEAN AND MEDIAN INCOME OF PROFESSIONAL ENGINEERS BY INDUSTRY OR SERVICE OF EMPLOYER, 1983

INDUSTRY OR SERVICE OF EMPLOYER	Total Employees Reported	Median	Mean
All Manufacturing/Extractive Employers	4,045	$42,600	$50,023
Aerospace & Aircraft Products	308	42,000	44,349
Chemical, Pharmaceutical & Allied Products	466	45,526	52,395
Electrical & Electronic Equipment	665	42,100	48,091
Fabricated Metal Products	491	40,010	50,041
Food, Beverage & Tobacco Products	164	42,750	50,178
Machinery (except electrical)	281	41,000	49,800
Petroleum & Coal Products	571	48,500	60,146
Primary Metal Industries	162	42,421	45,923
Rubber & Plastic Products	92	41,229	46,729
Stone, Clay & Glass and Concrete Products	170	40,263	46,540
Transportation Equipment	213	39,800	44,899
All Non-Manufacturing/Extractive	11,959	40,800	46,930
Colleges & Universities	586	42,950	44,651
Communication Services	296	42,950	47,703
Construction & Real Estate Development	958	47,500	57,618
Engineering Services	1,989	42,500	48,301
Government-Federal	812	38,476	40,218
Government-State	683	35,000	35,648
Government-Local	968	35,700	36,871
Private Practice	3,350	42,600	50,882
Research Organizations & Laboratories	185	42,600	45,168
Transportation Services	90	39,070	46,447
Utilities-Electric	1,158	40,500	43,741
Utilities-Gas	184	40,958	47,501
Utilities-Pipelines	111	45,000	50,225
Utilities-Other or Mixed	278	42,090	46,241

SOURCE: National Society of Professional Engineers, Professional Engineers' Income and Salary Survey, 1983.

TABLE 123

MEDIAN INCOME OF PROFESSIONAL ENGINEERS BY JOB FUNCTION, 1979-83

JOB FUNCTION	MEDIAN INCOME			PERCENT INCREASE	
	1979	1981	1983	1979-81	1981-83
Construction Supervision	$28,400	$31,500	$36,400	10 %	15 %
Design	26,750	30,374	35,700	13	17
Executive/Administrative	38,186	42,000	50,000	9	19
Production, Quality Control, Maintenance, etc.	27,300	31,800	36,700	16	15
Project Study & Analysis	33,000	37,000	37,800	12	2
Research and Development	31,500	35,000	41,040	11	17
Sales/Marketing	33,500	37,950	42,400	13	11
Teaching/Training	30,000	33,333	38,400	11	15

TABLE 124

MEDIAN INCOME OF PROFESSIONAL ENGINEERS BY REGION, 1979-83

REGION	Median Income			Percent Increase	
	1979	1981	1983	1979-81	1981-83
Northeastern States	$33,000	$37,500	$43,600	13 %	16 %
Southern States*	31,489	34,700	40,476	10	16
Great Lakes States	30,872	34,080	39,600	10	16
Great Plains States	30,000	33,600	38,000	12	13
Southwestern States	32,000	36,400	43,057	13	18
Pacific & Western States**	32,456	37,033	42,900	14	15

* Includes Puerto Rico and Panama. ** Includes Alaska, Hawaii, and Guam.

SOURCE: National Society of Professional Engineers, Professional Engineers' Income and Salary Survey, 1983.

TABLE 125

NUMBER, MEDIAN AND MEAN ANNUAL SALARIES OF PROFESSIONAL ENGINEERS BY METROPOLITAN AREA, 1983

METROPOLITAN AREA	Number Reported	Median	Mean
Atlanta (GA) & Vicinity	265	$43,000	$48,859
Baltimore (MD) & Vicinity	129	42,600	45,877
Boston (MA) & Vicinity	281	45,000	50,722
Chicago (IL) & Vicinity	667	42,000	47,251
Cincinnati (OH/KY/IN) & Vicinity	197	37,502	42,567
Cleveland (OH) & Vicinity	238	38,268	45,277
Dallas/Ft. Worth (TX) & Vicinity	447	43,000	54,881
Denver/Colorado Springs (CO) & Vicinity	241	44,400	50,134
Detroit (MI) & Vicinity	278	43,685	50,371
Houston (TX) & Vicinity	633	49,500	60,881
Indianapolis (IN) & Vicinity	121	40,300	45,686
Kansas City (MO/KS) & Vicinity	383	41,000	48,910
Los Angeles/Long Beach/San Diego	304	45,779	52,389
Miami (FL) & Vicinity	231	45,000	50,438
Milwaukee (WI) & Vicinity	179	41,666	47,265
Minneapolis/St. Paul (MN) & Vicinity	239	41,650	45,762
Naussau/Suffolk Counties (NY) & Vicinity	130	44,750	52,759
Newark/Jersey City (NJ) & Vicinity	288	48,125	53,618
New Orleans (LA) & Vicinity	205	42,880	51,373
New York City (NY) - 5 Boroughs	327	48,500	56,816
Philadelphia (PA/NJ) & Vicinity	432	43,622	48,900
Phoenix (AZ) & Vicinity	109	42,000	45,063
Pittsburg (PA) & Vicinity	304	40,900	47,633
St. Louis (MO) & Vicinity	304	41,000	50,275
San Francisco/Oakland (CA) & Vicinity	166	50,000	59,108
San Jose (CA) & Vicinity	83	46,075	50,569
Seattle/Everett (WA) & Vicinity	118	43,020	49,440
Tampa/St. Petersburg (FL) & Vicinity	173	40,500	47,708
Washington (DC/MD/VA) & Vicinity	368	46,000	51,264

SOURCE: D. Dietrich Associates, Inc., Engineering Salaries Survey, Fall 1982, Sept. 1982.

TABLE 126

NUMBER, WEIGHTED AVERAGE AND MEDIAN SALARIES OF ENGINEERS IN PRIVATE INDUSTRY BY TITLE*, 1982

TITLE*	No. of Employees	Weighted Average Base Salary	Actual Median Salaries
Engineer I	4,660	$24,773	$23,000
Engineer II	5,090	26,815	24,700
Engineer III	6,776	29,825	27,700
Engineer IV	8,255	34,119	30,900
Engineer V	7,194	38,650	35,200
Engineer VI	4,861	42,957	39,500
Engineer VII	2,900	47,014	44,800
Engineer VIII	1,364	52,460	49,800
Engineer, Dept. Head	760	60,633	58,400

* See original survey for definition of Title by level of responsibility

TABLE 127

WEIGHTED AVERAGE AND MEDIAN SALARIES OF ENGINEERS BY GEOGRAPHIC AREA AND TITLE*, 1982

	WEST [48]		NORTHEAST [54]		SOUTH [41]		MIDWEST/ CENTRAL [60]	
TITLE*	Weighted Average	Median	Weighted Average	Median	Weighted Average	Median	Weighted Average	Median
Engineer I	$25,250 (23,804)	$23,268	$24,596 (24,325)	$22,500	$24,509 (24,293)	$23,691	$25,403 (23,891)	23,400
Engineer II	27,912 (25,642)	25,502	27,054 (26,224)	23,900	26,657	26,100	26,789	25,338
Engineer III	31,189 (29,018)	28,836	30,388 (29,247)	27,193	29,856	28,000	29,348 (29,028)	27,979
Engineer IV	35,813 (32,980)	32,296	34,481 (33,028)	30,393	34,953 (33,618)	32,700	33,072 (32,694)	31,080
Engineer V	40,233 (36,351)	35,568	38,914 (38,340)	35,500	38,550 (37,334)	35,743	38,747 (37,645)	36,421
Engineer VI	46,890 (44,282)	41,000	42,374 (41,650)	40,081	43,517 (40,620)	39,468	41,403	40,253
Engineer VII	50,351 (46,201)	43,200	46,697	45,390	47,496 (45,873)	45,218	45,733	44,100
Engineer VIII	57,583 (56,326)	50,500	52,644	50,312	54,104 (51,260)	51,900	50,628	49,182
Engineer, Dept. Head	63,599 (60,912)	56,400	60,035	56,347	60,441	58,800	56,808	55,260

* See original survey for definitions by level of responsibility.

NOTE Figures in brackets indicate number of firms. Figures in parentheses adjusted to exclude one or two firms' data.

SOURCE: 1982 Hay Engineering Comparison, as reported in Mechanical Engineering, July 1983.

TABLE 128

AVERAGE ANNUAL COMPENSATION OF ENGINEERS BY DISCIPLINE AND LEVEL OF RESPONSIBILITY

RELATIONSHIP BY DISCIPLINE	Engineer Entry Level	Nonsupervisory Engineer	Engineering Manager
Chemical	$27,400	$35,800	$45,200
Civil	24,000	35,500	42,600
Computer/systems	23,000	34,800	43,500
Electrical	24,800	35,500	47,000
Industrial	24,000	35,800	45,700
Mechanical	24,000	34,800	42,600
Metallurgical	23,500	34,400	40,700
Nuclear	23,800	35,500	38,500
Other	26,000	36,200	45,700

TABLE 129

AVERAGE ANNUAL COMPENSATION OF ENGINEERS BY INDUSTRY AND LEVEL OF RESPONSIBILITY

RELATIONSHIP BY INDUSTRY	Engineer Entry Level	Nonsupervisory Engineer	Engineering Manager
Chemical-petroleum	$28,600	$36,900	$45,300
Consumer	26,200	34,000	47,500
Heavy Manufacturing	23,500	32,000	39,900
Light Manufacturing	24,200	33,000	46,100
High Technology	24,200	35,800	47,000
Nuclear	24,200	35,500	41,200
Utilities	26,500	37,600	47,500
Other	25,000	34,800	46,100

TABLE 130

AVERAGE ANNUAL COMPENSATION OF ENGINEERS BY REGION AND LEVEL OF RESPONSIBILITY

RELATIONSHIP BY REGION	Engineer Entry Level	Nonsupervisory Engineer	Engineering Manager
New England	$23,000	$37,200	$
New York/New Jersey	24,200	35,100	45,700
Mid-Atlantic	24,800	35,100	42,600
Midwest	24,200	34,000	44,800
Plains	24,200	36,200	48,900
Southwest	27,200	37,200	47,000
West	24,500	35,100	45,300

SOURCE: American Institute of Industrial Engineers, Inc., Compensation of Industrial Engineers, Eighth Edition, April 1983.

TABLE 131

NUMBER AND TOTAL ANNUAL INCOME OF INDUSTRIAL ENGINEERS BY TYPE OF EMPLOYER, JANUARY 1, 1983

TYPE OF EMPLOYER	Total Employees	Median Income	Mean Income
MANUFACTURING ORGANIZATIONS			
Aerospace & Aircraft Products	445	$33,420	$36,749
Apparel & Other Textile Products	177	30,000	34,171
Chemical, Pharmaceutical & Allied Products	420	38,194	42,397
Electrical & Electronic Equipment	1,022	33,000	36,740
Fabricated Metal Products	657	30,700	34,450
Food & Kindred Products	338	36,000	42,004
Furniture & Wood Products	90	30,150	34,110
Instruments & Related Products	113	34,000	38,222
Machinery (Except Electrical)	173	35,000	38,824
Paper & Allied Products	165	32,800	39,221
Petroleum & Coal Products	79	39,672	43,288
Primary Metal Industries	280	35,424	38,812
Printing & Publishing	107	33,800	38,692
Rubber & Misc. Plastics Products	171	33,910	35,117
Stone, Clay & Glass Products	95	31,956	34,567
Textile Mill Products	112	30,700	33,241
Transportation Equipment	405	33,480	35,508
NON-MANUFACTURING ORGANIZATIONS			
Banks & Finance Organizations	99	32,052	39,928
Colleges & Universities	293	37,284	40,583
Communications Organizations	66	37,000	40,209
Consultants (Engineering)	199	42,000	48,977
Consultants (Non-Engineering)	153	45,000	54,116
Government - Federal	342	37,387	38,372
Government - State & Local	71	31,850	34,749
Merchandising (Wholesale & Retail)	88	35,100	40,295
Health Care Organizations	236	33,400	37,313
Transportation Services	148	39,401	40,887
Utilities	228	35,738	38,342

SOURCE: American Institute of Industrial Engineers, Inc., Compensation of Industrial Engineers, Eighth Edition, April 1983.

TABLE 132

NUMBER AND TOTAL ANNUAL INCOME OF INDUSTRIAL ENGINEERS BY METROPOLITAN AREA, JANUARY 1, 1983

METROPOLITAN/ GEOGRAPHIC AREA	Total Employees Reported	Median Income	Mean Income
NORTHEASTERN STATES	1,770	$34,660	$39,242
Boston & Vicinity	183	33,000	37,250
New York City & Vicinity (NY/NJ/CT)	519	38,000	42,748
Philadelphia & Vicinity (PA/NJ)	269	34,465	39,982
Pittsburg & Vicinity (PA/OH)	205	32,760	36,491
Northeastern States (excluding areas above)	594	33,805	37,408
SOUTHEASTERN STATES	1,783	33,300	37,113
Atlanta & Vicinity	164	34,078	40,172
Washington/Baltimore & Vicinity (DC/MD/VA)	241	40,000	42,813
State of Florida	258	33,369	38,122
Southeastern States (excluding areas above)	1,120	31,999	35,207
GREAT LAKES STATES	1,511	34,500	38,328
Chicago & Vicinity (IL/IN)	435	36,500	41,119
Detroit & Vicinity	186	36,000	38,803
State of Ohio	401	34,416	38,336
Great Lakes States (excluding areas above)	489	33,000	35,658
NORTH CENTRAL STATES	650	32,991	35,787
Minneapolis/St. Paul & Vicinity (MN/WI)	139	33,500	36,192
St. Louis & Vicinity (MO/IL)	124	31,150	36,501
North Central States (excluding areas above)	387	32,982	35,413
SOUTH CENTRAL STATES	618	34,500	38,680
Dallas/Ft. Worth & Vicinity	191	34,000	38,818
Houston & Vicinity	127	36,600	39,447
South Central States (excluding areas above)	300	34,217	38,268
MOUNTAIN STATES	263	35,001	37,532
Denver/Boulder/Colorado Springs/ Pueblo & Vicinity	77	35,160	38,078
Phoenix & Vicinity	65	33,000	37,161
Mountain States (excluding areas above)	121	36,000	37,383
PACIFIC STATES	878	37,000	41,416
Los Angeles/San Diego & Vicinity	411	37,315	41,671
San Francisco/Oakland & Vicinity	247	40,080	46,096
Seattle/Everett & Vicinity	69	31,250	35,793
Pacific States (excluding areas above)	151	32,048	35,639

SOURCE: American Institute of Industrial Engineers, Inc., Compensation of Industrial Engineers, Eighth Edition, April 1983.

TABLE 133

NUMBER AND TOTAL ANNUAL INCOME OF INDUSTRIAL ENGINEERS BY DEGREE LEVEL, JANUARY 1, 1983

DEGREE LEVEL	Total Employees	Median Income	Mean Income
Ph.D.	331	$44,376	$47,381
M.S., M.E. or M.A. Degree	1,261	37,000	41,228
MBA	1,024	39,000	44,089
Bachelor's (Engineering)	2,809	32,535	37,002
Bachelor's (Non-Engineering)	1,301	32,311	35,734
Less than Bachelor's Degree	717	29,700	31,802

TABLE 134

NUMBER AND TOTAL ANNUAL INCOME OF INDUSTRIAL ENGINEERS BY YEARS OF EXPERIENCE, JANUARY 1, 1983

YEARS OF EXPERIENCE	Total Employees Reported	Median Income	Mean Income
Under One Year	46	$25,200	$25,781
One Year	185	25,000	25,807
Two Years	434	25,986	26,128
Three Years	421	27,278	27,435
Four Years	470	28,557	28,926
5 through 9 Years	1,563	31,560	32,957
10 through 14 Years	1,354	36,600	38,839
15 through 19 Years	917	39,500	42,419
20 through 24 Years	755	41,808	46,150
25 through 29 Years	605	44,000	48,143
30 Years and Over	699	44,000	51,717

TABLE 135

NUMBER AND TOTAL ANNUAL INCOME OF INDUSTRIAL ENGINEERS BY PRIMARY JOB FUNCTION, JANUARY 1, 1983

Primary Job Function	Total Employees Reported	Median Income	Mean Income
Corporate Official, General Management	617	$52,500	$63,525
Functional Management, Department Head	1,698	40,000	42,725
Supervisor of Technical or Professional Personnel	960	36,237	37,771
Engineer, Analyst or Other Professional	3,296	29,900	30,811
Consultant	486	40,000	45,287
Educator	274	37,459	40,478

SOURCE: American Institute of Industrial Engineers, Inc., Compensation of Industrial Engineers, Eighth Edition, April 1983.

TABLE 136

NUMBER AND TOTAL ANNUAL INCOME OF INDUSTRIAL ENGINEERS BY PRIMARY ACTIVITY OR SPECIALTY, JANUARY 1, 1983

Primary Activity or Specialty	Total Employees Reported	Median Income	Mean Income
Cost Control/Reduction Programs	648	$33,000	$35,807
Engineering Economics	134	35,000	40,343
Facility Planning Design, Layout Environment Protection	483	34,500	38,077
Management Information Systems	374	35,250	38,948
Computer Operations, Systems, Software	246	32,600	36,071
Organization, Admin.-IE Department, Plant	928	39,686	43,028
Materials Handling	127	35,000	35,767
Warehousing, Shipping, Receiving	93	33,800	35,665
Methods Engrg., Proc. Design, Value Analysis, Human Productivity	813	30,300	32,629
Manufacturing Engineering, Automation	491	33,350	35,708
Maintenance, Plant Engineering	175	33,300	35,945
Operations Supervision, Assembly, Clerical, Office	165	40,000	45,484
Mathematical Models, Networks, Simulation	189	37,000	39,713
Production and Inventory Control, Scheduling, Forecasting	167	34,524	39,960
Materials Management	115	39,500	43,696
Quality Control, Reliability	144	33,200	37,053
Work Measurement, Standards, Performance Measures	952	29,225	31,181
Incentive Plans, Group, Individ., Supervisor	148	32,500	35,272

SOURCE: Society of Manufacturing Engineers, Inc., Compensation in Manufacturing, (Engineers and Managers), Fourth Edition, 1982.

TABLE 137

NUMBER, TOTAL ANNUAL BASE SALARY, AND TOTAL ANNUAL COMPENSATION OF ENGINEERS EMPLOYED IN MANUFACTURING BY YEARS OF EXPERIENCE, 1982

YEARS OF EXPERIENCE	BASE SALARY			TOTAL COMPENSATION		
	No.	Median	Mean	No.	Median	Mean
Under 5 Years	113	$25,200	$25,454	113	$25,500	$25,876
5-9 Years	101	27,500	27,960	101	28,000	28,587
10-14 Years	96	29,300	29,040	96	29,545	29,571
15-19 Years	91	29,600	30,634	91	30,160	31,230
20-24 Years	71	30,030	31,200	71	30,900	31,732
25-29 Years	56	31,463	32,165	56	31,613	32,468
30 Years and Over	58	30,480	32,344	58	31,160	32,850

TABLE 138

NUMBER, TOTAL ANNUAL BASE SALARY, AND TOTAL ANNUAL COMPENSATION OF ENGINEERS EMPLOYED IN MANUFACTURING BY TYPE OF TRAINING, 1982

COLLEGE/TECHNICAL INSTITUTE MAJOR	BASE SALARY			TOTAL COMPENSATION		
	No.	Median	Mean	No.	Median	Mean
Electrical Engineering	31	$31,700	$31,619	31	$32,400	$32,641
Industrial Engineering	74	29,220	29,947	74	29,579	30,420
Manufacturing Engineering	79	27,600	28,167	79	28,000	28,507
Mechanical Engineering	206	29,450	29,915	206	29,814	30,338
Other Engineering Major	40	27,946	28,803	40	28,000	29,063
Some Field Other Than Engineering	106	27,223	28,269	106	27,550	28,999
Did Not Attend College/ Technical Institute	56	28,232	29,049	56	29,000	29,636

SOURCE: Society of Manufacturing Engineers, Inc., Compensation in Manufacturing, (Engineers and Managers), Fourth Edition, 1982.

TABLE 139

NUMBER, TOTAL ANNUAL BASE SALARY, AND TOTAL ANNUAL COMPENSATION OF ENGINEERS EMPLOYED IN MANUFACTURING BY TYPE OF EMPLOYER, 1982

TYPE OF EMPLOYER	BASE SALARY			TOTAL COMPENSATION		
	No.	Median	Mean	No.	Median	Mean
Chemical, Pharmaceutical, Rubber & Plastic Products	10	$27,432	$29,129	10	$29,582	$30,859
Aerospace & Aircraft Products	87	30,300	30,576	87	30,683	30,965
Primary Metal Industries	11	28,300	27,676	11	29,000	29,095
Fabricated Metal Products	134	27,275	27,342	134	27,766	27,639
Machinery (Except Electrical)	46	27,345	27,839	46	27,780	28,233
Electrical and Electronic Equipment	128	29,700	30,949	128	29,815	31,311
Instruments, Controls & Related Products	32	27,103	27,135	32	27,195	27,530
Transportation Equipment	88	30,870	30,966	88	32,013	32,027
All Non-Manufacturing Employers	1			1		
All Manufacturing/ Extractive Employers	591	28,500	29,330	591	29,100	29,840

TABLE 140

NUMBER, TOTAL ANNUAL BASE SALARY, AND TOTAL ANNUAL COMPENSATION OF ENGINEERS EMPLOYED IN MANUFACTURING BY EDUCATION LEVEL, 1982

EDUCATION LEVEL	BASE SALARY			TOTAL COMPENSATION		
	No.	Median	Mean	No.	Median	Mean
Graduate Degree	48	$32,625	$32,971	48	$33,175	$33,503
B.S. in Engineering	202	29,020	29,966	202	29,620	30,462
Other BA/BS Degree	69	27,296	28,792	69	27,800	29,637
Engineering Technician Degree	65	26,500	27,461	65	27,000	27,867
Some College (No Degree)	150	28,970	28,840	150	29,394	29,226
No College	40	27,318	28,009	40	28,000	28,438

SOURCE: Society of Manufacturing Engineers, Inc., Compensation in Manufacturing, (Engineers and Managers), Fourth Edition, 1982.

TABLE 141

NUMBER, TOTAL ANNUAL BASE SALARY, AND TOTAL ANNUAL COMPENSATION OF ENGINEERS EMPLOYED IN MANUFACTURING BY GEOGRAPHIC AREA, 1982

GEOGRAPHIC AREA	Base Salary			Total Compensation		
	No.	Median	Mean	No.	Median	Mean
NORTHEASTERN STATES	164	$28,032	$28,823	164	$28,440	$29,209
Boston (MA) & Vicinity	29	28,000	28,841	29	28,200	29,337
New York City (NY/NJ) & Vicinity	21	30,500	31,551	21	30,800	31,705
Philadelphia (PA/NJ) & Vicinity	16	25,415	26,957	16	25,415	27,141
Pittsburgh (PA/OH) & Vicinity	13	30,000	29,118	13	30,000	30,074
Northeastern States (excluding areas above)	85	28,000	28,450	85	28,100	28,806
SOUTHERN STATES	71	27,378	28,638	71	27,732	28,811
Washington (DC/MD/VA) & Vicinity	6	29,089	34,275	6	29,089	34,275
State of Florida	7	27,864	28,452	7	27,864	28,452
Southern States (excluding areas above)	58	27,013	28,077	58	27,389	28,289
GREAT LAKES STATES	132	28,000	29,035	132	28,530	29,553
Chicago (IL/IN) & Vicinity	28	29,929	31,069	28	29,929	31,124
Detroit (MI) & Vicinity	17	32,025	30,826	17	32,120	31,417
State of Ohio	27	28,000	28,631	27	28,000	29,332
Great Lakes States (excluding areas above)	60	27,385	27,760	60	28,000	28,390
NORTH CENTRAL STATES	62	29,367	29,580	62	29,800	30,517
Minneapolis/St. Paul (MN/WI) & Vicinity	18	28,362	28,769	18	28,797	29,103
St. Louis (MO/IL) & Vicinity	4			4		
North Central States (excluding areas above)	40	29,550	30,128	40	30,555	31,280
SOUTH CENTRAL STATES	39	28,000	28,792	39	28,000	29,681
Dallas/Ft. Worth (TX) & Vicinity	6	27,300	28,233	6	27,300	28,817
Houston (TX) & Vicinity	15	28,000	28,393	15	28,000	28,604
South Central States (excluding areas above)	18	28,536	29,311	18	28,536	30,867
MOUNTAIN STATES	36	27,950	29,401	36	29,721	30,109
Denver/Boulder/Colorado Springs/ Pueblo (CO) & Vicinity	22	28,500	29,362	22	29,750	30,055
Mountain States (excluding areas above)	14	27,896	29,463	14	28,847	30,194
PACIFIC STATES	84	30,642	31,237	84	31,530	31,665
Los Angeles/San Diego (CA) & Vicinity	50	29,850	30,449	50	29,850	30,724
San Francisco/Oakland (CA) & Vicinity	16	34,750	33,647	16	35,145	34,440
Seattle/Everett (WA) & Vicinity	15	31,500	31,727	15	32,850	32,362
Pacific States (excluding areas above)	3			3		

TABLE 142

NUMBER, TOTAL ANNUAL BASE SALARY, AND TOTAL ANNUAL COMPENSATION OF MANAGERS EMPLOYED IN MANUFACTURING BY EDUCATION LEVEL, 1982

EDUCATION LEVEL	BASE SALARY			TOTAL COMPENSATION		
	No.	Median	Mean	No.	Median	Mean
Graduate Degree	13	$40,600	$46,919	13	$46,500	$51,526
B.S. in Engineering	17	37,000	37,537	17	38,200	40,733
Other BA/BS Degree	5	36,000	38,445	5	38,425	42,965
Engineering Technician Degree	8	30,650	30,574	8	33,900	32,699
Some College (No Degree)	42	33,763	35,922	42	35,663	37,267
No College	13	35,000	33,852	13	35,000	34,767

SOURCE: Institute of Electrical and Electronics Engineers, Inc., IEEE 1983 Membership Salary and Fringe Benefit Survey, October 1983.

TABLE 143

NUMBER AND TOTAL ANNUAL INCOME OF IEEE ENGINEERS EMPLOYED FULL-TIME IN AREA OF PRIMARY TECHNICAL COMPETENCE BY HIGHEST DEGREE EARNED, 1983

LEVEL OF EDUCATION	Number Reported	Median Income
Doctoral Degree	978	$48,225
MBA Degree	225	45,000
MSEE Degree	1,286	45,000
Master's (Not MSEE or MBA) Degree	667	42,000
BSEE Degree	2,346	39,400
Other B.S. Degree	445	40,000
BET or BSET Degree	123	30,500
BA Degree	127	37,100
ET or AS (Two-Year) Degree	85	33,750
Two Years of College or More (But no Degree)	114	40,625
Under Two Years of College	27	36,000
No College	28	40,850

TABLE 144

NUMBER AND MEDIAN ANNUAL INCOME OF IEEE ENGINEERS EMPLOYED FULL-TIME IN AREA OF PRIMARY TECHNICAL COMPETENCE BY YEARS OF EXPERIENCE, 1983

YEARS OF EXPERIENCE	Number Reported	Median Income
One Year	241	$27,114
Two Years	268	28,810
Three Years	283	30,442
Four Years	223	32,009
Five Years	273	33,512
Six Years	202	34,950
Seven Years	206	36,323
Eight Years	236	37,631
Nine Years	195	38,875
10 - 11 Years	510	40,620
12 - 13 Years	448	42,719
14 - 15 Years	425	44,560
16 - 17 Years	348	46,142
18 - 19 Years	269	47,466
20 - 21 Years	346	48,531
22 - 23 Years	321	49,337
24 - 25 Years	334	49,884
26 - 27 Years	181	50,173
28 - 29 Years	186	50,203
30 Years or More	1,023	49,974

SOURCE: Institute of Electrical and Electronics Engineers, Inc., IEEE 1983 Membership Salary and Fringe Benefit Survey, October 1983.

TABLE 145

NUMBER AND TOTAL ANNUAL INCOME OF FULL-TIME EMPLOYED IEEE ENGINEERS BY SEX AND RACE, 1983

SEX AND RACE	Number Reported	Median Income
Male	6,259	$42,250
Female	53	32,275
White (Not of Hispanic Origin)	5,867	42,120
Black	38	40,500
Hispanic	68	37,800
Asian/Pacific Islander	320	41,150
American Indian/Alaskan Native	9	43,000

TABLE 146

NUMBER AND TOTAL ANNUAL INCOME OF IEEE ENGINEERS EMPLOYED FULL-TIME IN AREA OF PRIMARY TECHNICAL COMPETENCE BY LEVEL OF PROFESSIONAL RESPONSIBILITY, 1983

PROFESSIONAL RESPONSIBILITY LEVEL	Number Reported	Median Income
Engineer 1 (Equivalent to GS-5)	83	$25,900
Engineer 2 (Equivalent to GS-7)	215	27,780
Engineer 3 (Equivalent to GS-9)	546	30,108
Engineer 4 (Equivalent to GS-11)	1,084	36,000
Engineer 5 (Equivalent to GS-12)	1,186	40,500
Engineer 6 (Equivalent to GS-13)	1,124	44,500
Engineer 7 (Equivalent to GS-14)	1,014	50,000
Engineer 8 (Equivalent to GS-15)	606	58,121
Other	591	50,000

SOURCE: Institute of Electrical and Electronics Engineers, Inc., IEEE 1983 Membership Salary and Fringe Benefit Survey, October 1983.

TABLE 147

NUMBER AND MEDIAN ANNUAL INCOME OF IEEE ENGINEERS EMPLOYED FULL-TIME IN AREA OF PRIMARY TECHNICAL COMPETENCE BY INDUSTRY OR SERVICE OF EMPLOYER, 1983

INDUSTRY OR SERVICE OF EMPLOYER	Number Reported	Median Income
Aerospace & Defense	1,280	$45,095
Food & Kindred Products	19	35,750
Paper & Applied Products	42	35,900
Printed & Allied Products	10	32,300
Chemical & Allied Products	55	43,200
Petroleum & Related Products	93	48,000
Rubber & Plastic Products	18	34,000
Stone, Clay, Glass & Ceramic Products	30	38,850
Primary Metal Products	56	41,400
Fabricated Metal Products	31	39,000
Machinery, except Electrical	26	39,190
Steam Engines, Turbines & Turbine Generator Sets	16	44,920
Computer Hardware	555	41,013
Computer Software	152	40,075
Electronic Machinery, Equipment & Supplies	165	45,000
Electric Measuring Instruments & Test Equipment	99	39,000
Power, Distribution & Specialty Transformers	65	35,500
Consumer Radio & TV Sets	31	46,400
Telephone & Telegraph Apparatus	227	44,000
Transportation Equipment	28	33,780
Motor Vehicle	29	35,287
Aircraft	25	39,800
Manufacturers of Instruments - Professional, Scientific, Controlling, Photo & Optical Goods, Watches & Clocks	73	39,000
Engineering Lab, Scientific & Research Instruments and Associated Equipment	66	42,500
Instruments - Measuring, Controlling & Indicating Physical Characteristics	108	36,650
Photo Equipment	21	45,000
Miscellaneous Manufacturing Industries	123	40,980
Communications Services	178	43,000
Telephone Services	76	41,980
Radio Broadcasting	9	45,100
Television Broadcasting	25	45,000
Electrical, Gas & Sanitary Systems	60	38,590
Electrical Companies & Systems	499	40,500
Electrical & Other Services Combined	77	39,600
Wholesale Trade	8	56,000
Business Services	24	44,000
Computer & Data Processing Services	90	40,000
Medical & Health Services	86	36,550
Education Services	184	36,000
Services Not Classified	34	38,635
Consulting Engineers	350	47,000
Electronics Components & Accessories	190	41,650
Nonprofit Education & Research Agencies	297	42,000
Federal Government	523	40,000
State Government	33	32,904
Local Government	21	34,070
Government Support Services	40	38,650
Other (Not Listed)	243	40,000

SOURCE: Institute of Electrical and Electronics Engineers, Inc., IEEE 1983 Membership Salary and Fringe Benefit Survey, October 1983.

TABLE 148

NUMBER AND TOTAL ANNUAL INCOME OF IEEE ENGINEERS EMPLOYED FULL-TIME BY AREA OF PRIMARY TECHNICAL COMPETENCE, 1983

PRIMARY TECHNICAL COMPETENCE	Number Reported	Median Income
Acoustics, Speech & Signal Processing	135	$41,000
Aerospace & Electronic Systems	452	46,000
Antennas & Propagation	92	46,034
Broadcasting	34	40,300
Cable Systems	29	42,000
Circuits & Systems	318	37,000
Communications	570	43,000
Components, Hybrids	72	41,115
Computer Hardware	464	38,935
Computer Maintenance	30	35,195
Computer Operations	42	34,000
Computer Software	967	39,000
Consumer Electronics	25	40,000
Control Systems	181	40,700
Data Banks, Electronic Surveillance	18	50,000
Education	131	38,000
Electrical Insulation	19	36,000
Electromagnetic Compatibility	47	41,340
Electron Devices	178	45,560
Electro-Optical Systems	79	45,000
Energy	53	43,472
Engineering Management	727	50,848
Engineering in Medicine & Biology	96	35,500
Engineering Writer	15	30,000
Environment	6	35,212
Geoscience Electronics	16	41,485
Industrial Elec. & Control Instrumentation	189	37,000
Industry Applications	204	40,900
Information Theory	9	50,300
Instrumentation & Measurement	152	39,355
Magnetics	29	44,180
Man-Machine Interface	11	39,700
Manufacturing Technology	29	43,300
Microwave Theory & Techniques	78	40,850
Nuclear & Plasma Sciences	35	41,200
Power Engineering	712	40,000
Radiation	10	35,616
Reliability	60	37,750
Robotics	6	46,703
Sonics & Ultrasonics	25	40,900
Transportation	15	32,210
Vehicular Technology	13	35,700
Other Technical	67	45,000
Non-Technical	33	48,300
Non-E/E Engineer	45	42,500

SOURCE: Institute of Electrical and Electronics Engineers, Inc., IEEE 1983 Membership Salary and Fringe Benefit Survey, October 1983.

TABLE 149

NUMBER AND TOTAL ANNUAL INCOME OF IEEE ENGINEERS EMPLOYED FULL-TIME IN AREA OF PRIMARY TECHNICAL COMPETENCE BY GEOGRAPHIC AREA, 1983

GEOGRAPHIC AREA	Number Reported	Median Income
Northeastern States (Excluding Boston, New York City & Vicinities)	725	$42,000
Boston & Vicinity	354	45,000
New York City & Vicinity	353	46,100
Eastern States (Excluding Philadelphia, Washington/Baltimore & Vicinities)	451	39,636
Philadelphia & Vicinity	167	43,740
Washington/Baltimore & Vicinity	520	45,220
Southeastern States (Excluding Florida, Atlanta/Huntsville & Vicinities)	356	37,878
Florida	196	38,750
Atlanta/Huntsville & Vicinity	173	41,340
Central States (Excluding Chicago/ Milwaukee & Vicinity)	502	38,605
Chicago/Milwaukee & Vicinity	278	40,050
Southwestern States (Excluding Houston/ Dallas & Vicinity)	402	39,450
Houston/Dallas & Vicinity	286	42,100
Western States (Excluding Los Angeles/San Diego, San Francisco/Oakland & Vicinities)	541	38,700
Los Angeles/San Diego & Vicinity	527	46,700
San Francisco/Oakland & Vicinity	565	45,000

SOURCE: Institute of Electrical and Electronics Engineers, Inc., IEEE 1983 Membership Salary and Fringe Benefit Survey, October 1983.

TABLE 150

NUMBER AND TOTAL ANNUAL INCOME OF IEEE ENGINEERS EMPLOYED FULL-TIME IN AREA OF PRIMARY TECHNICAL COMPETENCE BY JOB FUNCTION, 1983

JOB FUNCTION	Number Reported	Median income
Basic Research	281	$44,800
Computer Applications (Programmers, Systems Analysts, Software Engineers)	845	37,956
Computer Systems/Operations	128	40,000
Consulting	305	49,500
Dean, Professor, Instructor, etc.	326	38,125
Design & Development Engineering	1,649	41,400
Engineering Services Evaluation (Quality Control, Reliability Standards, Tests)	276	39,450
Engineering Systems Planning & Design (Utilities)	476	39,600
Engineering Systems Planning & Design (not Utilities)	438	43,160
Engineering Support (Draftsman, Laboratory Assistant, Technician)	22	25,524
General & Corporate Management	563	60,000
Manufacturing & Production	104	40,000
Marketing/Sales	202	43,690
Member of Technical Staff (MTS)	377	41,300
Operations, Construction & Maintenance (Utilities)	174	40,500
Operations, Construction & Maintenance (not Utilities)	103	38,400
Other E.E.	51	36,000
Other Engineers (not E.E.)	22	45,500
Other (not Covered in Other Categories)	176	48,250

SOURCE: Institute of Electrical and Electronics Engineers, Inc., IEEE Washington, D.C. Section 1982 Salary and Fringe Benefits Survey, July 1982.

TABLE 151

NUMBER AND WEIGHTED AVERAGE SALARY OF ENGINEERS AND SCIENTISTS IN THE WASHINGTON, D. C. AREA BY GRADE LEVEL (G. S.), 1982

GRADE LEVEL*	(G.S.)	Private Industry		Federal Gov't.		Total	
		No.	Salary	No.	Salary	No.	Salary
1	5	95	$20,027	3	$16,973	98	$19,933
2	7	245	23,559	10	21,107	255	23,462
3	9	347	28,558	42	24,381	389	28,107
4	11	429	33,515	59	27,312	488	32,765
5	12	311	37,089	86	31,281	397	35,830
6	13	208	40,561	517	40,560	725	40,560
7	14	168	47,937	493	48,517	661	47,099
8	15	112	49,774	390	54,895	502	53,752
Total		1,915	33,798	1,600	44,928	3,515	38,864

* The eight grades reflect increasing levels of responsibility as defined in the U.S. Department of Labor's survey of Professional, Administrative, Technical and Clerical salaries.

SALARIES OF TECHNICIANS AND TECHNOLOGISTS

• The median salary paid to engineering technicians with an associate degree increased at an annual rate of 11.8% from 1979 to 1981, while the median salary of a non-degree technician rose at an annual rate of 11.1%, according to **SALARIES OF ENGINEERING TECHNICIANS AND TECHNOLOGISTS 1981**, conducted by the **Engineering Manpower Commission** of the **American Association of Engineering Societies.** Technologists' salaries rose at an annual rate of 10.5%. As was true in other fields, salaries increased by years since receipt of the degree as shown in Table 152 for engineering technicians and in Table 153 for engineering technologists with a bachelor's degree.

The 1981 survey report is based on returns from establishments employing 36,721 technicians and 2,462 technologists. Table 154 presents 1981 median salaries of engineering technicians by type of employment and years since graduation. Engineering technicians receive higher salaries working in large industrial firms and the lowest salaries working in small industrial firms (Table 155).

Regardless of years since graduation, engineering technicians receive higher salaries working in industry than in any other employment sector. Those technicians working in state governments receive the lowest salaries - again regardless of experience (Table 156). Bachelor of Engineering Technology graduates earn the highest salaries working in miscellaneous manufacturing firms, and the lowest working in research and development (Table 157).

• The second annual **LABORATORY TECHNICIAN SALARIES SURVEY** conducted by **D. Dietrich Associates, Inc.** covered 101 firms employing 4,767 technicians in seven position levels. Generally, those laboratory aides and technicians working for government, regardless of level of responsibility, earn the highest average salaries, while those working for scientific or consulting firms earn the least. Median and average hourly rates for laboratory aides and technicians by title (level of responsibility) and type of employer for 1982 are shown in Table 158.

SOURCE: Engineering Manpower Commission, Salaries of Engineering Technicians and Technologists, 1981.

TABLE 152

NUMBER, MEDIAN AND MEAN ANNUAL SALARIES OF ENGINEERING TECHNICIANS BY YEARS SINCE GRADUATION, 1981 (WEIGHTED NATIONAL DATA)

YEARS SINCE GRADUATION	NUMBER OF TECHNICIANS	SALARY	
		Median	Mean
0	744	$14,150	$14,300
1	1,797	14,700	14,850
2	1,990	15,200	15,400
3	2,133	15,700	15,950
4	2,150	16,250	16,450
5	2,157	16,750	17,000
6	2,026	17,250	17,500
7	2,113	17,700	17,950
8	2,035	18,200	18,400
9-11	5,522	19,050	19,250
12-14	5,839	20,200	20,350
15-17	4,741	21,200	21,250
18-20	4,302	21,900	21,900
21-23	3,826	22,450	22,450
24-26	3,374	22,800	22,800
27-29	2,696	23,000	23,050
30-34	4,384	23,100	23,250
35+	5,573	23,150	23,350

TABLE 153

NUMBER, MEDIAN AND MEAN ANNUAL SALARIES OF ENGINEERING BACHELOR OF TECHNOLOGY GRADUATES BY YEARS SINCE GRADUATION, 1981 (WEIGHTED NATIONAL DATA)

YEARS SINCE GRADUATION	NUMBER OF TECHNOL-OGISTS	SALARY	
		Median	Mean
0	52	$20,000	$20,050
1	345	20,350	20,500
2	372	20,700	20,900
3	435	21,050	21,300
4	505	21,350	21,650
5	343	21,600	22,050
6	289	21,900	22,350
7	241	22,150	22,700
8	191	22,350	23,000
9-11	447	22,750	23,500
12-14	314	23,200	24,150
15-17	197	23,500	24,550
18-20	152	23,650	24,800
21-23	93	23,650	24,900
24-26	64	23,550	24,900
27-29	71	23,400	24,800
30-34	100	23,200	24,650
35+	81	22,800	24,350

SOURCE: Engineering Manpower Commission, Salaries of Engineering Technicians and Technologists, 1981.

TABLE 154

NUMBER AND MEDIAN SALARIES OF ENGINEERING TECHNICIANS BY TYPE OF EMPLOYMENT AND SELECTED YEARS SINCE GRADUATION, 1981

TYPE OF EMPLOYMENT	YEARS SINCE GRADUATION - BASE YEAR 1981								
	1	5	7	9-11	15-17	18-20	21-23	27-29	35+
Aerospace	(21) $12,050	(24) $14,550	(19) $15,750	(43) $17,450	(20) $20,150	(27) $21,150	(39) $21,900	(25) $22,850	(59) $23,350
Machinery	(1) 0	(3) 0	(8) 17,250	(24) 18,600	(14) 20,850	(16) 21,750	(18) 22,450	(11) 23,400	(32) 24,100
Metal Industries	(17) 14,050	(28) 15,650	(34) 16,450	(67) 17,500	(48) 19,250	(27) 19,800	(32) 20,150	(30) 20,250	(70) 19,250
Instruments	(69) 15,150	(40) 16,400	(51) 17,000	(95) 17,900	(62) 19,500	(69) 20,150	(37) 20,650	(32) 21,150	(43) 20,050
Electrical & Electronic Equipment	(356) 15,000	(512) 16,400	(455) 17,100	(920) 18,050	(625) 19,700	(632) 20,300	(527) 20,700	(385) 21,100	(537) 20,500
Mechanical Industries	(5) 14,900	(43) 16,400	(59) 17,000	(119) 17,950	(76) 19,700	(85) 20,500	(55) 21,200	(43) 22,250	(75) 22,500
Chemicals	(1) 0	(9) 16,600	(8) 17,550	(25) 19,000	(11) 21,550	(19) 22,600	(17) 23,400	(14) 24,400	(45) 24,550
Other Manufacturing	(41) 16,100	(116) 20,000	(143) 21,650	(360) 23,650	(342) 26,200	(360) 26,850	(278) 27,300	(260) 27,700	(353) 27,850
Design Consulting & Engineering Services	(87) 14,600	(69) 16,500	(87) 17,450	(194) 18,750	(156) 21,050	(123) 21,900	(138) 22,550	(83) 23,300	(167) 23,350
Construction	(17) 12,300	(27) 16,600	(34) 18,650	(91) 21,300	(69) 24,900	(73) 25,900	(61) 26,550	(38) 27,150	(93) 27,350
Consulting	(69) 14,700	(42) 16,550	(52) 17,500	(134) 18,850	(106) 21,100	(77) 21,900	(76) 22,500	(43) 23,000	(100) 22,550
Engineering Services	(18) 14,150	(27) 16,400	(35) 17,450	(60) 18,850	(50) 21,150	(46) 22,000	(62) 22,650	(40) 23,450	(67) 23,900
Electric & Gas Utilities	(93) 15,550	(201) 18,300	(160) 19,500	(574) 21,100	(637) 23,250	(324) 23,950	(218) 24,400	(171) 24,950	(361) 25,150
Research and Development	(272) 16,900	(216) 18,550	(169) 19,350	(483) 20,450	(393) 22,150	(361) 22,750	(372) 23,150	(245) 23,350	(673) 22,600

SOURCE: Engineering Manpower Commission, Salaries of Engineering Technicians and Technologists, 1981.

TABLE 155

NUMBER AND MEDIAN SALARIES OF ENGINEERING TECHNICIANS IN INDUSTRY BY SIZE OF EMPLOYER AND SELECTED YEARS SINCE GRADUATION, 1981

SIZE OF EMPLOYER	YEARS SINCE GRADUATION - BASE YEAR 1981								
	1	5	7	9-11	15-17	18-20	21-23	27-29	35+
Large Industrial[1]	(608) $15,400	(729) $17,550	(650) $18,600	(1,642) $20,000	(1,455) $22,250	(1,207) $22,950	(993) $23,450	(807) $23,750	(1,286) $23,450
Medium Industrial[2]	(266) 14,450	(353) 16,650	(319) 17,700	(810) 19,100	(604) 21,200	(546) 21,850	(474) 22,250	(305) 22,550	(782) 22,350
Small Industrial[3]	(90) 13,400	(128) 15,750	(163) 16,800	(351) 18,150	(257) 20,000	(214) 20,600	(187) 21,000	(137) 21,450	(316) 21,650

[1]Respondents with 5,000 or more employees.
[2]Respondents with between 500 and 5,000 employees.
[3]Respondents with fewer than 500 employees.

TABLE 156

NUMBER AND MEDIAN SALARIES OF ENGINEERING TECHNICIANS BY TYPE OF EMPLOYMENT AND SELECTED YEARS SINCE GRADUATION, 1981

TYPE OF EMPLOYMENT	YEARS SINCE GRADUATION - BASE YEAR 1981								
	1	5	7	9-11	15-17	18-20	21-23	27-29	35+
All Employment Sectors	(1,797) $14,700	(2,157) $16,750	(2,113) $17,700	(5,522) $19,050	(4,741) $21,200	(4,302) $21,900	(3,826) $22,450	(2,696) $23,000	(5,573) $23,150
All Industry	(976) 15,100	(1,242) 17,100	(1,170) 18,100	(2,895) 19,500	(2,397) 21,700	(2,049) 22,400	(1,753) 22,900	(1,308) 23,300	(2,493) 22,900
All Manufacturing Industry	(502) 15,000	(725) 16,600	(715) 17,400	(1,537) 18,550	(1,121) 20,600	(1,150) 21,450	(950) 22,100	(761) 22,750	(1,170) 22,000
All Non-Manufacturing Industry	(479) 15,400	(523) 18,000	(461) 19,150	(1,367) 20,700	(1,283) 22,750	(902) 23,350	(805) 23,650	(548) 23,850	(1,329) 23,700
Federal Government	(3) 0	(11) 13,450	(19) 15,200	(65) 17,750	(73) 22,150	(73) 23,750	(87) 24,950	(85) 26,400	(160) 27,100
State Government	(66) 10,450	(168) 11,950	(176) 12,750	(531) 13,900	(690) 16,000	(684) 16,850	(522) 17,500	(275) 18,050	(423) 17,200
Local Government	(1) 0	(4) 0	(4) 0	(18) 20,750	(10) 22,450	(31) 23,150	(26) 23,750	(33) 24,500	(45) 24,200

SOURCE: Engineering Manpower Commission, Salaries of Engineering Technicians and Technologists, 1981.

TABLE 157

NUMBER AND MEDIAN SALARIES OF ENGINEERING BACHELOR OF TECHNOLOGY GRADUATES BY TYPE OF EMPLOYMENT AND SELECTED YEARS SINCE GRADUATION, 1981

TYPE OF EMPLOYMENT	YEARS SINCE GRADUATION - BASE YEAR 1981								
	1	5	7	9-11	15-17	18-20	21-23	27-29	35+
All Employment Sectors	(52) $20,000	(343) $21,600	(241) $22,150	(447) $22,750	(197) $23,500	(152) $23,650	(93) $23,650	(71) $23,400	(81) $22,800
All Industry	(181) 19,900	(197) 21,750	(136) 22,500	(232) 23,350	(100) 24,200	(65) 24,300	(48) 24,150	(28) 23,650	(37) 22,750
All Manufacturing Industry	(99) 20,550	(97) 22,850	(82) 23,500	(132) 24,050	(65) 24,000	(47) 23,700	(34) 23,350	(20) 22,800	(23) 22,400
All Non-Manufacturing Industry	(82) 19,550	(100) 21,100	(54) 21,800	(100) 22,800	(35) 24,450	(18) 25,000	(14) 25,400	(8) 25,750	(14) 25,100
Miscellaneous Manufacturing	(37) 22,350	(35) 25,950	(30) 27,250	(37) 28,450	(23) 28,450	(11) 27,750	(11) 26,950	(2) 0	(11) 24,100
Electrical & Electronic Products	(46) 19,850	(49) 20,550	(43) 20,850	(74) 21,200	(33) 21,600	(26) 21,650	(20) 21,700	(14) 21,650	(10) 21,450
Research and Development	(51) 19,200	(57) 20,100	(16) 20,550	(29) 21,100	(5) 22,150	(4) 0	(1) 0	(2) 0	(5) 24,100

SOURCE: D. Dietrich Associates, Inc., Laboratory Technician Salaries Survey 1982, June 1982.

TABLE 158

MEDIAN AND WEIGHTED AVERAGE HOURLY RATES OF LABORATORY AIDES AND TECHNICIANS BY TITLE* AND TYPE OF EMPLOYER, 1982

TITLE*	TYPE OF EMPLOYER					
	Scientific Consult. [19]	Industry [41]	Utilities [7]	Res. & Dev. [31]	Government [4]	All Firms [101]
Lab. Aide/Trainee						
Weighted Average	$4.46	$5.96	$	$5.20	$7.70	$5.34
Median	4.62	5.78		5.10	7.35	5.15
Lab. Technician I						
Weighted Average	5.55	6.91	8.68	6.35	8.91	6.89
Median	5.65	6.64	8.19	5.90		6.39
Lab. Technician II						
Weighted Average	5.95	7.81	8.78	7.40	9.19	7.74
Median	6.50	7.65	9.41	7.44	9.29	7.48
Lab. Technician III						
Weighted Average	7.40	8.89	10.40	8.87	10.16	9.00
Median	7.21	9.03	10.46	8.17	9.93	8.65
Lab. Technician IV						
Weighted Average	8.29	10.51	11.27	10.30	12.29	10.33
Median	8.08	10.26	12.74	9.62		9.72
Lab. Technician V						
Weighted Average	9.75	12.51	12.30	10.73		11.30
Median	9.81	12.58		11.40		11.53
Supervising Lab. Technician/ Lab. Technician VI						
Weighted Average	10.94	12.62	11.50	12.15		12.15
Median	9.86	12.05		12.40		11.50

* See Original Survey for definition of Title by level of responsibility.

NOTE: Figures in brackets indicate number of firms.

FEDERAL SALARIES

• On October 1, 1982, federal government's white-collar workers received a 4% salary increase, despite the recommendation by the President's pay advisers that an average 18.47% increase would be required to achieve comparability between the pay schedule of federal white-collar workers and industry. Additionally, the salary ceiling was raised to $57,500 from $50,112.50. Table 159 presents the white-collar salary schedule effective as of October 1, 1982. The President has recommended a 3.5% pay increase beginning on January 1, 1984 for the 1.4 million white-collar federal workers. The proposed 3.5% increase under the general schedule is shown in Table 160.

• Table 161 presents the number, median grade and average salary of federal white-collar workers by sex in selected occupations for all geographical areas of the U.S. as of October 1, 1981. Women continue to be paid less than men in almost every occupational series listed. In the engineering and architecture series, women's salaries as a percentage of men's ranged from a high of 121.3% in ship surveying to a low of 58.3% in fire prevention engineering. However, it is important to note that in both these occupational areas, the number of women is too small for meaningful averages. In the engineering occupations with significant numbers of women, the data indicate that women's salaries as a percentage of men's ranges from about 74% in chemical, civil, industrial, nuclear and aerospace engineering to 87% in biomedical engineering.

In the physical sciences, those workers employed in astronomy and space science reported the highest average salaries - $41,219. However, in this category, women earned only 86% as much as men. The lowest salaries, as expected, were reported by technicians.

In the life sciences series, agricultural extension paid the highest salary - $42,867. This is also the field in which women came closest to matching men's salaries, earning 94.5% as much as men. Agronomy with only six women showed the widest salary gap between men and women - $31,654 and $18,804 for men and women respectively. However, among fields with larger numbers of women, the widest salary gap is in soil science where women earned only 68.5% of salaries paid to men.

In the health sciences series, women earned slightly more than men only in a few of those fields in which they dominate. For example, in nursing, women had an average salary of $22,840, compared to men's $21,498. However, women were 92.7% of all nurses employed by the federal government. Other fields in which women dominate and had higher average salaries included nurse anesthetist, dental assistant, dental hygienist, and medical record technician. Occupations where women predominate but earn less than men include medical technologist, medical technician, dental assistant, dietician, nutritionist, occupational, physical or educational therapist, and pharmacy technician.

In the social and behavioral sciences, those working as psychologists reported the highest average salaries - $34,659. However, in this field, women earned only 84.6% as much as men.

• Annual salaries of doctoral scientists and engineers employed by the federal government are compared for 1977 through 1981 in Table 163. These salary data are published by the **National Science Foundation** in its **CHARACTERISTICS OF DOCTORAL SCIENTISTS AND ENGINEERS IN THE UNITED STATES, 1981.** In 1981,

highest median salaries were paid to economists ($46,700), and the lowest salaries were paid to biological scientists - $37,700.

• The **U. S. Department of Labor** in its **NATIONAL SURVEY OF PROFESSIONAL, ADMINISTRATIVE, TECHNICAL AND CLERICAL PAY** collects data on private industry employment. Table 162 compares that data for selected occupations and levels of responsibility with salaries paid to federal workers as of March 1982.

• In **SALARIES 1983**, the **American Chemical Society** analyzed salary information of its members by type of employer. Table 164, which presents salaries of chemists employed in the federal government by degree level, sex and years since the B.S. for 1983, shows that women continue to be paid less than men regardless of degree level or years since the B.S. except at the entry level for bachelor's degree graduates where salaries are similar.

SOURCE: U. S. Office of Personnel Management.

TABLE 159

ANNUAL SALARIES OF FEDERAL WORKERS UNDER THE GENERAL SCHEDULE BY GRADE AND STEP LEVELS

October 1, 1982

	1	2	3	4	5	6	7	8	9	10
GS- 1	$8,676	$8,965	$9,254	$9,542	$9,831	$10,000	$10,286	$10,572	$10,585	$10,857
2	9,576	9,987	10,310	10,585	10,703	11,018	11,333	11,648	11,963	12,278
3	10,645	11,000	11,355	11,710	12,065	12,420	12,775	13,130	13,485	13,840
4	11,949	12,347	12,745	13,143	13,541	13,939	14,337	14,735	15,133	15,531
5	13,369	13,815	14,261	14,707	15,153	15,599	16,045	16,491	16,937	17,383
6	14,901	15,398	15,895	16,392	16,889	17,386	17,883	18,380	18,877	19,374
7	16,559	17,111	17,663	18,215	18,767	19,319	19,871	20,423	20,975	21,527
8	18,339	18,950	19,561	20,172	20,783	21,394	22,005	22,616	23,227	23,838
9	20,256	20,931	21,606	22,281	22,956	23,631	24,306	24,981	25,656	26,331
10	22,307	23,051	23,795	24,539	25,283	26,027	26,771	27,515	28,259	29,003
11	24,508	25,325	26,142	26,959	27,776	28,593	29,410	30,227	31,044	31,861
12	29,374	30,353	31,332	32,311	33,290	34,269	35,248	36,227	37,206	38,185
13	34,930	36,094	37,258	38,422	39,586	40,750	41,914	43,078	44,242	45,046
14	41,277	42,653	44,029	45,405	46,781	48,157	49,533	50,909	52,285	53,661
15	48,553	50,171	51,789	53,407	55,025	56,643	58,261*	59,879*	61,497*	63,115*
16	56,945	58,843*	60,741*	62,639*	64,537*	66,435*	68,333*	70,231*	72,129*	
17	66,708*	68,932*	71,156*	73,380*	75,604*					
18	78,184*									

* The rate of basic pay for employees at these rates is limited by Section 5308 of Title 5 of the United States Code to the rate for Level V of the Executive Schedule, which, pursuant to Public Law 95-66, would be $57,500.

SOURCE: U.S. Office of Personnel Management.

TABLE 160

PROPOSED† ANNUAL SALARIES OF FEDERAL WORKERS UNDER THE GENERAL SCHEDULE BY GRADE AND STEP LEVELS

January 1, 1984

GS	1	2	3	4	5	6	7	8	9	10
1	$8,980	$9,279	$9,578	$9,876	$10,175	$10,350	$10,646	$10,942	$10,955	$11,232
2	10,097	10,337	10,671	10,955	11,078	11,404	11,730	12,056	12,382	12,708
3	11,017	11,384	11,751	12,118	12,485	12,852	13,219	13,586	13,953	14,320
4	12,367	12,779	13,191	13,603	14,015	14,427	14,839	15,251	15,663	16,075
5	13,837	14,298	14,759	15,220	15,681	16,142	16,603	17,064	17,525	17,986
6	15,423	15,937	16,451	16,965	17,479	17,993	18,507	19,021	19,535	20,049
7	17,138	17,709	18,280	18,851	19,422	19,993	20,564	[illegible]	21,706	22,277
8	18,981	19,614	20,247	20,880	21,513	22,146	22,779	23,412	24,045	24,678
9	20,965	21,664	22,363	23,062	23,761	24,460	25,159	25,858	26,557	27,256
10	23,088	23,858	24,628	25,398	26,168	26,938	27,708	28,478	29,248	30,018
11	25,366	26,212	27,058	27,904	28,750	29,596	30,442	31,288	32,134	32,980
12	30,402	31,415	32,428	33,441	34,454	35,467	36,480	37,493	38,506	39,519
13	36,152	37,357	38,562	39,767	40,972	42,177	43,382	44,587	45,792	46,997
14	42,722	44,146	45,570	46,994	48,418	49,842	51,266	52,690	54,114	55,538
15	50,252	51,927	53,602	55,277	56,952	58,627	60,302	61,977	63,652	65,327
16	58,938	60,903	62,868	64,833	66,798*	68,763*	70,728*	72,693*	74,658*	
17	69,042*	71,343*	73,644*	75,945*	78,246*					
18	80,920*									

* In most cases, the maximum salary payable is $66,000.

† President Reagan's alternative 3.5% pay increase proposal.

SOURCE: Office of Personnel Management, Occupations of Federal White-Collar and Blue-Collar Workers, October 31, 1981.

TABLE 161

NUMBER, MEDIAN GRADE AND AVERAGE SALARY OF FEDERAL CIVILIAN WHITE COLLAR WORKERS BY SEX, ALL AREAS, OCTOBER 1981

OCCUPATION SERIES AND GROUP	TOTAL			MALE		FEMALE		
	Number	Median Grade	Average Salary	Number	Average Salary	Number	Average Salary	Women's Salary as % of Men's
General Engineering	17,162	13	$38,903	16,881	$39,037	281	$30,897	79.1
Engineering Technician	26,769	9	22,714	24,546	23,336	2,223	15,850	67.9
Safety Engineering	641	12	34,053	623	34,279	18	26,217	76.5
Fire Prevention Engineering	117	13	34,448	116	34,571	1	20,170	58.3
Materials Engineering	957	13	36,871	916	37,300	41	27,281	73.1
Landscape Architecture	693	11	30,574	629	31,094	64	25,466	81.9
Architecture	1,619	12	32,500	1,513	32,775	106	28,588	87.2
Construction Control	4,277	9	22,163	4,190	22,260	87	17,484	78.5
Civil Engineering	16,211	12	32,937	15,731	33,197	480	24,417	73.5
Surveying Technician	2,597	5	14,159	2,343	14,518	254	10,850	74.7
Engineering Drafting	1,998	5	15,650	1,505	15,891	493	14,915	93.9
Environmental Engineering	1,979	12	32,114	1,837	32,567	142	26,261	80.6
Construction Analyst	845	11	29,134	811	29,416	34	22,421	76.2
Mechanical Engineering	10,408	12	32,977	10,221	33,121	187	25,082	75.7
Nuclear Engineering	2,518	13	37,548	2,461	37,773	57	27,857	73.7
Electrical Engineering	4,612	12	32,930	4,504	33,084	108	26,482	80.0
Electronics Engineering	20,115	12	35,791	19,765	35,936	350	27,584	76.7
Electronics Technician	21,427	11	28,389	21,010	28,580	417	18,754	65.6
Biomedical Engineering	209	12	30,250	192	30,598	17	26,317	86.0
Aerospace Engineering	7,887	13	38,749	7,705	38,978	182	29,037	74.5
Naval Architecture	1,142	12	34,676	1,099	34,950	43	27,674	79.2
Ship Surveying	96	12	30,009	91	29,678	5	36,027	121.3
Mining Engineering	503	12	34,570	495	34,717	8	25,471	73.4
Petroleum Engineering	460	13	38,295	448	38,595	12	27,092	70.2
Agricultural Engineering	437	11	31,183	435	31,233	2	20,436	65.5

NOTE: Median Grade and Average Salary are based on those employees reported by general schedule grades or equivalent salary level.

SOURCE: Office of Personnel Management, Occupations of Federal White-Collar and Blue-Collar Workers, October 31, 1981.

TABLE 161 (continued)

NUMBER, MEDIAN GRADE AND AVERAGE SALARY OF FEDERAL CIVILIAN WHITE COLLAR WORKERS BY SEX, ALL AREAS, OCTOBER 1981

OCCUPATION SERIES AND GROUP	TOTAL			MALE		FEMALE		
	Number	Median Grade	Average Salary	Number	Average Salary	Number	Average Salary	Women's Salary as % of Men's
Ceramic Engineering	48	13	$39,621	47	$39,812	1	$30,640	77.0
Chemical Engineering	1,459	12	33,223	1,373	33,732	86	25,101	74.4
Welding Engineering	96	12	31,597	93	31,849	3	23,787	74.7
Industrial Engineering Technician	2,423	9	23,813	2,195	24,358	228	18,571	76.2
Industrial Engineering	2,334	12	32,194	2,272	32,420	62	23,923	73.8
Engr. & Architecture Student Trainee	2,171	4	11,589	1,688	11,675	483	11,289	96.7
General Physical Science	4,868	13	38,462	4,443	39,504	425	27,571	69.8
Health Physics	527	13	35,091	482	35,709	45	28,474	79.7
Physics	4,501	13	38,047	4,348	38,304	153	30,739	80.2
Physical Science Technician	3,912	7	18,910	2,989	19,836	923	15,909	80.2
Geophysics	547	13	34,897	519	35,600	28	21,871	61.5
Hydrology	2,169	12	30,820	2,046	31,298	123	22,853	73.0
Hydrologic Technician	1,438	8	19,785	1,228	20,533	210	15,413	75.1
Chemistry	7,969	12	32,492	6,479	33,684	1,490	27,310	81.1
Metallurgy	538	12	36,343	524	36,478	14	31,313	85.8
Astronomy & Space Science	578	13	41,219	552	41,466	26	35,970	86.7
Meteorology	2,131	12	33,842	2,050	34,173	81	25,454	74.5
Meteorological Technician	2,294	10	23,978	2,147	24,311	147	19,107	78.6
Geology	2,544	12	32,679	2,267	33,458	277	26,304	78.6
Oceanography	792	12	32,816	723	33,500	69	25,642	76.5
Navigational Information	494	11	27,651	433	28,193	61	23,801	84.4
Cartography	4,541	11	26,516	3,776	27,306	765	22,613	82.8
Cartographic Technician	2,212	7	19,524	1,554	20,619	658	16,937	82.1
Geodesy	336	12	29,990	308	30,567	28	23,642	77.3
Food Technology	176	12	33,272	140	34,875	36	27,039	77.5
Forest Products Technology	119	13	35,257	114	35,717	5	24,787	69.4
General Fish & Wildlife Admin.	193	14	38,389	185	39,002	8	24,193	62.0

NOTE: Median Grade and Average Salary are based on those employees reported by general schedule grades or equivalent salary level.

SOURCE: Office of Personnel Management, Occupations of Federal White-Collar and Blue-Collar Workers, October 31, 1981.

TABLE 161 (continued)

NUMBER, MEDIAN GRADE AND AVERAGE SALARY OF FEDERAL CIVILIAN WHITE COLLAR WORKERS BY SEX, ALL AREAS, OCTOBER 1981

OCCUPATION SERIES AND GROUP	TOTAL			MALE		FEMALE		
	Number	Median Grade	Average Salary	Number	Average Salary	Number	Average Salary	Women's Salary as % of Men's
General Biological Science	4,527	12	$30,761	3,665	$32,020	862	$25,408	79.4
Microbiology	1,764	12	30,861	1,163	32,916	601	26,884	81.7
Biological Technician	5,650	6	16,755	3,644	17,426	2,006	15,535	89.1
Pharmacology	392	13	36,661	305	37,681	87	33,084	87.8
Ecology	244	12	29,238	207	29,878	37	25,657	85.8
Zoology	133	13	36,286	115	37,108	18	31,036	83.6
Physiology	424	13	33,823	349	34,744	75	29,540	85.0
Entomology	764	13	33,866	732	34,182	32	26,631	78.0
Botany	188	11	29,573	132	32,040	56	23,760	74.2
Plant Pathology	326	13	35,153	309	35,689	17	25,401	71.2
Plant Physiology	273	13	34,437	256	34,791	17	29,104	83.7
Horticulture	101	11	28,377	84	30,046	17	20,131	67.0
Genetics	249	13	36,274	233	36,574	16	31,905	87.2
Soil Conservation	4,800	11	25,785	4,617	26,116	183	17,434	66.8
Soil Conservation Tech.	2,504	6	16,383	2,389	16,580	115	12,301	74.2
Soil Science	2,049	11	26,887	1,950	27,298	99	18,804	68.5
Agronomy	352	12	31,438	346	31,654	6	18,983	60.1
Agriculture Management	2,867	11	24,957	2,691	25,328	176	19,282	76.1
Agricultural Extension	58	14	42,867	42	43,524	16	41,143	94.5
Range Conservation	1,423	9	23,490	1,322	23,899	101	18,141	75.9
Forestry	6,773	11	27,619	6,458	28,086	315	18,048	64.3
Forestry Technician	15,627	5	14,370	13,154	14,858	2,473	11,771	79.2
Fishery Biology	1,389	11	28,236	1,285	28,753	104	21,847	76.0
Wildlife Biology	1,491	11	26,142	1,316	26,948	175	20,079	74.5

NOTE: Median Grade and Average Salary are based on those employees reported by general schedule grades or equivalent salary level.

SOURCE: Office of Personnel Management, Occupations of Federal White-Collar and Blue-Collar Workers, October 31, 1981.

TABLE 161 (continued)

NUMBER, MEDIAN GRADE AND AVERAGE SALARY OF FEDERAL CIVILIAN WHITE COLLAR WORKERS BY SEX, ALL AREAS, OCTOBER 1981

OCCUPATION SERIES AND GROUP	TOTAL			MALE		FEMALE		
	Number	Median Grade	Average Salary	Number	Average Salary	Number	Average Salary	Women's Salary as % of Men's
Digital Computer Systems Admin.	1,100	13	$37,977	951	$39,179	149	$30,310	77.4
Computer Operation	10,241	7	18,542	5,780	19,707	4,461	17,033	86.4
Computer Specialist	30,617	12	30,044	22,952	31,518	7,665	25,632	81.3
Computer Science	581	12	31,151	447	33,115	134	24,598	74.3
Computer Clerk & Assistant	7,746	5	16,036	2,362	16,927	5,384	15,645	92.4
Administrative Officer	8,368	11	27,713	4,055	32,205	4,313	23,491	72.9
Program Management	4,178	14	43,997	3,811	44,347	367	40,370	91.0
Management Analysis	11,702	11	29,014	7,156	31,377	4,546	25,293	80.6
Communications Management	2,391	12	30,216	2,263	30,554	128	24,236	79.3
Program Analysis	13,508	12	32,935	8,436	35,743	5,072	28,266	79.1
Communications Specialist	2,490	11	27,318	2,141	28,208	349	21,861	77.5
Operations Research	3,462	13	36,587	3,071	37,643	391	28,294	75.2
Mathematics	3,638	12	32,885	2,833	34,384	805	27,610	80.3
Mathematics Technician	178	6	17,126	65	17,421	113	16,957	97.3
Mathematical Statistician	1,017	12	33,615	798	34,988	219	28,615	81.8
Statistician	2,644	12	32,375	1,889	33,817	755	28,770	85.1
Statistical Assistant	2,808	6	16,722	408	16,803	2,400	16,708	99.4
Actuary	119	13	37,533	103	38,527	16	31,137	80.8
Accounting	21,665	12	30,167	18,110	31,261	3,555	24,593	78.7
General Attorney	17,118	13	38,768	13,056	40,072	4,062	34,578	86.3
Medical Officer	9,779	15	48,124	8,249	48,283	1,530	47,266	97.9
Physician's Assistant	964	11	24,260	680	24,957	284	22,590	90.5
Nurse	35,529	9	22,742	2,598	21,498	32,931	22,840	106.2
Nurse Anesthetist	509	12	33,219	160	33,112	349	33,268	100.5
Nursing Assistant	34,988	5	13,890	11,569	14,159	23,419	13,757	97.2

NOTE: Median Grade and Average Salary are based on those employees reported by general schedule grades or equivalent salary level.

SOURCE: Office of Personnel Management, Occupations of Federal White-Collar and Blue-Collar Workers, October 31, 1981.

TABLE 161 (continued)

NUMBER, MEDIAN GRADE AND AVERAGE SALARY OF FEDERAL CIVILIAN WHITE COLLAR WORKERS BY SEX, ALL AREAS, OCTOBER 1981

OCCUPATION SERIES AND GROUP	TOTAL			MALE		FEMALE		
	Number	Median Grade	Average Salary	Number	Average Salary	Number	Average Salary	Women's Salary as % of Men's
General Health Science	1,348	13	$34,967	830	$37,851	518	$30,345	80.2
Medical Technologist	4,572	7	19,666	1,484	20,204	3,088	19,407	96.1
Medical Technician	2,671	6	16,330	1,144	17,011	1,527	15,819	93.0
Medical Record Technician	2,048	5	14,308	221	13,921	1,827	14,354	103.1
Dental Officer	1,015	15	45,448	982	45,859	33	33,230	72.5
Dental Assistant	2,970	4	13,566	201	13,653	2,769	13,560	99.3
Dental Hygiene	368	5	15,281	10	14,702	358	15,297	104.0
Dietitian & Nutritionist	1,237	9	24,536	40	27,379	1,197	24,441	89.2
Occupational Therapist	678	9	22,102	81	23,274	597	21,943	94.3
Physical Therapist	682	9	22,500	245	23,842	437	21,748	91.2
Educational Therapist	110	9	21,669	53	22,265	57	21,115	94.8
Optometrist	87	12	34,408	85	34,545	2	28,576	82.7
Speech Pathology & Audiology	542	12	29,876	284	31,623	258	27,953	88.4
Orthotist & Prosthetist	253	9	21,600	247	21,646	6	19,690	91.0
Podiatrist	55	14	41,925	53	41,915	2	42,185	100.6
Pharmacist	2,590	11	26,813	2,063	27,286	527	24,960	91.5
Pharmacy Technician	1,680	5	13,532	798	13,744	882	13,341	97.1
Veterinary Med. Science	2,166	12	34,115	2,075	34,275	91	30,471	88.9
Industrial Hygiene	868	12	28,523	711	29,521	157	24,002	81.3
Consumer Safety	1,598	12	33,301	1,314	34,238	284	28,964	84.6
Environmental Health Tech.	141	6	17,419	127	17,817	14	13,803	77.5
Animal Health Technician	779	7	19,340	731	19,632	48	14,896	75.9
Economist	5,521	13	34,540	4,519	35,680	1,002	29,398	82.4
Psychology	3,368	13	34,659	2,781	35,613	587	30,139	84.6
Psychology Aid & Tech.	495	7	17,356	214	18,384	281	16,573	90.1

NOTE: Median Grade and Average Salary are based on those employees reported by general schedule grades or equivalent salary level.

SOURCE: Office of Personnel Management, Occupations of Federal White-Collar and Blue-Collar Workers, October 31, 1981.

TABLE 161 (continued)

NUMBER, MEDIAN GRADE AND AVERAGE SALARY OF FEDERAL CIVILIAN WHITE COLLAR WORKERS BY SEX, ALL AREAS, OCTOBER 1981

OCCUPATION SERIES AND GROUP	TOTAL			MALE		FEMALE		
	Number	Median Grade	Average Salary	Number	Average Salary	Number	Average Salary	Women's Salary as % of Men's
Social Science	2,817	12	$33,910	1,835	$35,348	982	$31,224	88.3
Social Work	3,637	11	28,007	2,030	28,675	1,607	27,164	94.7
Sociology	107	12	30,862	63	33,734	44	26,750	79.3
Foreign Affairs	2,499	13	38,824	2,095	39,935	404	33,067	82.8
International Relations	55	14	41,251	45	42,661	10	34,907	81.8
Manpower Research & Analysis	80	14	40,740	50	43,393	30	36,317	83.7
Manpower Development	1,270	13	35,955	928	37,534	342	31,672	84.4
Geography	184	12	29,974	149	30,852	35	26,237	85.0
Equal Employment Opportunity	269	11	28,402	117	31,125	152	26,307	84.5
History	546	12	31,450	438	32,733	108	26,249	80.2
General Anthropology	63	13	38,766	52	39,455	11	35,505	90.0
Archeology	512	11	23,997	367	25,084	145	21,247	84.7
Secretary	85,933	5	15,826	842	14,825	85,091	15,836	106.8

NOTE: Median Grade and Average Salary are based on those employees reported by general schedule grades or equivalent salary level.

SOURCE: U.S. Department of Labor, National Survey of Professional Administrative, Technical and Clerical Pay, March 1982.

TABLE 162

COMPARISON OF AVERAGE ANNUAL SALARIES IN PRIVATE INDUSTRY WITH SALARY RATES FOR FEDERAL EMPLOYEES UNDER THE GENERAL SCHEDULE, March 1982

OCCUPATION AND LEVEL*	Salaries in Indus.	Grade	SALARY RATES UNDER THE GENERAL SCHEDULE										
			1	2	3	4	5	6	7	8	9	10	Average Salary**
Programmers/Programmer Analysts I	$17,535	GS-5	$12,854	$13,282	$13,710	$14,138	$14,566	$14,994	$15,422	$15,850	$16,278	$16,706	$14,539
Accountants I	18,260												
Chemists I	19,640												
Computer Operators II	13,895												
Engineers I	23,622												
Engineering Technicians III	20,219												
Drafters IV	20,964												
Programmers/Programmer Analysts II	20,629	GS-7	15,922	16,453	16,984	17,515	18,046	18,577	19,108	19,639	20,170	20,701	18,007
Accountants II	22,068												
Chemists II	23,474												
Computer Operators IV	19,325												
Engineers II	26,060												
Engineering Technicians IV	23,620												
Drafters V	25,909												
Programmers/Programmer Analysts III	25,192	GS-9	19,477	20,126	20,775	21,424	22,073	22,722	23,371	24,020	24,669	25,318	21,811
Accountants III	25,673												
Attorneys I	25,162												
Chemists III	28,016												
Computer Operators VI	23,267												
Engineers III	29,311												
Engineering Technicians V	26,761												
Programmers/Programmer Analysts IV	29,365	GS-11	23,566	24,352	25,138	25,924	26,710	27,496	28,282	29,068	29,854	30,640	26,594
Accountants IV	31,658												
Attorneys II	31,696												
Chemists IV	34,047												
Chief Accountants I	34,506												
Engineers IV	34,443												
Programmers/Programmer Analysts V	35,430	GS-12	28,245	29,187	30,129	31,071	32,013	32,955	33,897	34,839	35,781	36,723	32,065
Accountants V	38,680												
Attorneys III	39,649												
Chemists V	40,207												
Chief Accountants II	39,708												
Engineers V	40,677												
Accountants VI	48,549	GS-13	33,586	34,706	35,826	36,946	38,066	39,186	40,306	41,426	42,546	43,666	38,571
Attorneys IV	49,818												
Chemists VI	46,971												
Chief Accountants III	50,414												
Engineers VI	47,442												
Attorneys V	61,579	GS-14	39,689	41,102	42,335	43,658	44,981	46,304	47,627	48,950	50,273	51,596	45,713
Chemists VII	53,658												
Chief Accountants IV	61,255												
Engineers VII	54,338												
Attorneys VI	76,202	GS-15	46,685	48,241	49,797	51,353	52,909	54,465	56,021	57,577	59,133	60,689	53,513
Engineers VIII	62,494												

* See Original Survey for definition of levels.

** Mean salary of all general schedule employees in each grade as of March 31, 1982.

SOURCE: National Science Foundation, Characteristics of Doctoral Scientists and Engineers in the United States, 1981, NSF 82-332.

TABLE 163

NUMBER AND MEDIAN ANNUAL SALARIES OF CIVILIAN DOCTORAL SCIENTISTS AND ENGINEERS EMPLOYED BY THE FEDERAL GOVERNMENT BY FIELD, 1977-81

FIELD	1977				1979				1981			
	Number	Percent	Percent of total employed	Median annual salary	Number	Percent	Percent of total employed	Median annual salary	Number	Percent	Percent of total employed	Median annual salary
TOTAL	21,368	100.0	7.5	$29,700	23,923	100.0	7.6	$33,400	25,087	100.0	7.3	$40,300
Physical Scientists	3,945	18.5	6.9	29,700	4,591	19.2	7.6	33,200	4,343	17.3	6.9	40,100
Chemists	1,814	8.5	4.9	29,100	2,110	8.8	5.3	32,900	2,131	8.5	5.1	39,100
Physicists/Astronomers	2,131	10.0	10.6	30,100	2,481	10.4	12.0	33,300	2,212	8.8	10.4	42,200
Mathematical Scientists	604	2.8	4.1	29,300	817	3.4	5.3	36,300	852	3.4	5.5	40,200
Mathematicians	449	2.1	3.4	29,400	575	2.4	4.4	38,500	553	2.2	4.2	40,800
Statisticians	155	0.7	9.0	*	242	1.0	10.2	*	299	1.2	11.7	39,200
Computer Specialists	251	1.2	4.4	30,500	336	1.4	5.0	*	355	1.4	3.9	38,700
Environmental Scientists	2,415	11.3	18.5	30,700	2,714	11.3	18.6	35,300	3,069	12.2	19.2	40,700
Earth Scientists	1,634	7.6	16.7	30,600	1,827	7.6	16.4	36,000	2,060	8.2	17.0	40,900
Oceanographer	287	1.3	18.4	28,300	387	1.6	23.3	32,400	367	1.5	20.6	40,200
Atmospheric Scientists	494	2.3	29.1	31,400	500	2.1	27.7	35,400	642	2.6	30.2	41,200
Engineers	3,519	16.5	7.8	30,000	3,571	14.9	7.1	35,200	3,805	15.2	6.7	42,600
Life Scientists	6,760	31.6	9.4	28,400	7,485	31.3	9.3	32,000	7,590	30.3	8.8	38,300
Biological Scientists	3,367	15.8	8.0	27,900	3,949	16.5	8.6	30,900	4,156	16.6	8.4	37,700
Agricultural Scientists	2,496	11.7	17.5	27,700	2,472	10.3	16.4	32,700	2,435	9.7	15.3	38,500
Medical Scientists	897	4.2	5.8	32,400	1,064	4.4	5.5	35,300	999	4.0	4.7	40,700
Psychologists	1,231	5.8	3.6	30,600	1,102	4.6	2.9	34,800	1,211	4.8	2.8	39,000
Social Scientists	2,643	12.4	6.2	31,400	3,307	13.8	6.8	34,600	3,862	15.4	7.3	44,400
Economists	950	4.4	8.8	32,900	1,262	5.3	10.8	37,900	1,258	5.0	9.4	46,700
Sociologists/Anthropologists	132	0.6	1.4	*	121	0.5	1.2	*	301	1.2	2.7	*
Other Social Scientists	1,561	7.3	7.0	31,300	1,924	8.0	7.2	32,700	2,303	9.2	8.1	44,200

* No median computed for groups with fewer than 20 individuals reporting salary.

NOTES: Percents may not add to 100 because of rounding. Median salaries computed for full-time civilians only.

SOURCE: American Chemical Society, Salaries 1983 - Analysis of the American Chemical Society's 1983 Survey of Salaries and Employment, June 1983.

TABLE 164

MEDIAN SALARIES OF CHEMISTS* EMPLOYED IN GOVERNMENT BY DEGREE LEVEL, SEX AND YEARS SINCE B. S., 1983

Years Since B. S.	BACHELOR'S			MASTER'S			Ph. D.		
	Men	Women	Total	Men	Women	Total	Men	Women	Total
0-1	$14,500	$	$14,500	$	$	$	$	$	$
2-4	20,000	20,128	20,000	20,606	21,000	20,931			
5-9	21,809	20,500	21,778	24,121	24,710	24,361	30,677	27,117	30,327
10-14	26,500	22,607	26,000	28,500	28,000	28,500	35,000	39,800	36,000
15-19	33,000	26,300	30,000	32,000	27,650	31,750	36,000	32,000	36,000
20-24	37,000	29,647	36,000	35,124	31,836	35,000	45,000	42,564	44,621
25-29	35,000	33,000	34,000	37,500		37,500	48,000	38,990	47,500
30-34	38,500	31,000	38,250	45,406	31,700	39,600	49,500	42,000	49,250
35-39	33,850	22,450	28,500	34,093		34,093	53,661	39,005	51,600
≥ 40	40,000		40,000	42,760	36,225	42,760	53,300	64,831	54,500
All Years	31,000	24,000	29,000	32,000	27,675	31,700	40,000	39,000	43,000

* Includes only members of the American Chemical Society.

Note: Blanks indicate no respondents.

FACULTY SALARIES

• The only national faculty salary surveys that present data by discipline as well as by rank and control are conducted by the **College and University Personnel Association.** Data are collected separately for those faculty employed in public institutions and private institutions. The **1982-83 NATIONAL FACULTY SALARY SURVEY BY DISCIPLINE AND RANK IN STATE COLLEGES AND UNIVERSITIES** presents data in 61 selected disciplines from 227 institutions employing over 52,000 full-time faculty members. The **1982-83 NATIONAL FACULTY SALARY SURVEY BY DISCIPLINE AND RANK IN PRIVATE COLLEGES AND UNIVERSITIES** presents data in 61 selected disciplines from 299 private institutions employing almost 30,000 faculty members.

Faculty members at public institutions generally receive higher salaries than those at private institutions, but the opposite is true in high demand fields. For example, the average salary for engineering faculty is $33,806 in private institutions, but only $29,722 in public ones. This is true regardless of rank. In computer sciences, the average salary for professors was $36,483 at private institutions, but only $33,851 at public institutions. Highest average salary was reported by faculty in the health professions at private institutions, while the lowest average salary was reported by those in secretarial studies and agriculture at private institutions. For all disciplines and ranks combined, the average salary of faculty members employed by public institutions was $26,475 in 1982-83, while the comparable figure for private institutions was $25,697. Average faculty salaries by rank and discipline in public and private institutions are reported in Tables 165 and 166 respectively.

• The salary survey conducted for the **CHRONICLE OF HIGHER EDUCATION** by **John Minter Associates, Inc.** provides data by field and rank on a sample of faculty at public and private four-year institutions and public two-year institutions throughout the U.S. The largest percentage increase in faculty salaries in 1982-83 was for social scientists (8.9%) and for engineers and computer scientists (8.5%). Engineers and computer scientists also report the highest average salary - $30,381. The lowest percentage increase (6.6%) as well as the lowest average salary ($23,406) was in vocational education, home economics, nursing and health (Table 169).

With the exception of science and mathematics faculty, four-year private institutions pay faculty more than do four-year public institutions in all fields (Table 170).

Male faculty members continue to receive higher average salaries than female faculty. For example, male science and mathematics faculty members received average salaries of $27,850, while the average salary for female faculty members in the same field was $22,601 - 18.8% less (Table 171). The salaries of men and women are closer in public institutions than in private ones, but the gap is still there as shown in Table 172.

John Minter Associates also collected data on earnings above base salary by rank, discipline and type of institution. Business and economics as well as engineering and computer science faculty reported the highest average earnings above base salary (Table 167).

• The ninth annual survey by **Oklahoma State University** of faculty salaries at institutions that are members of the National Association of State Universities and Land Grant Colleges finds that new assistant professors in business and management earn an average salary of $28,319, 50% more than the $18,858 average salary of their counterparts in letters. Highest average salary for new assistant professors was reported by law faculty ($31,738) while the lowest was reported by foreign language faculty ($18,257). Law faculty continue to earn the highest salaries regardless of rank, while the lowest salaries are paid to faculty in fine and applied arts, letters, and technical and occupational curricula (Table 168).

• The purchasing power of faculty salaries rose in 1982-83 for the first time in almost a decade, according to the **ANNUAL REPORT ON THE ECONOMIC STATUS OF THE PROFESSION** by the **American Association of University Professors.** After adjusting for inflation, the average faculty salary rose 2% during 1982-83. The report, based on data collected from 2,800 institutions, indicates that the average salary for all faculty members at two- and four-year colleges and universities was $27,430 in academic year 1982-83, while the average compensation for all faculty members was $32,760 (Table 176).

The highest percentage increase (8.3%) was reported by faculty employed in private independent institutions, while the lowest increase was reported at public institutions (5.9%). Faculty members at public colleges earned an average of $27,860 in 1982-83, compared with $28,680 for those at independent private institutions. Those at church-related institutions earned $22,950. Average salaries by rank, type of institution and category are reported in Table 173, while average compensation by these same variables is reported in Table 174.

Regardless of type of affiliation, type of institution, or rank, women consistently earn less than their male counterparts as shown in Table 175. For example, male professors at doctoral institutions (Category I) earned an average $39,640, while female professors earned $35,640 or 10% less. One explanation for the salary disparity between the sexes is that women faculty tend to be concentrated in lower-paid disciplines (Table 175).

Faculty members in medical schools continue to receive much higher salaries than do other faculty regardless of rank or type of institution. For example, the average salary for medical school faculty was $38,590 compared to $27,430 for all faculty, while the average compensation for medical school faculty was $45,620 compared to $28,580 for all other faculty (Table 177).

• Salaries of faculty members rose 6.9% for academic year 1982-83, according to preliminary information from the **National Center for Education Statistics.** The average salary for a full-time faculty member on a 9-month contract was $26,929. As was true in other surveys, the salaries for male faculty continued to exceed those for female faculty. Their averages were $28,394 and $23,020, respectively. Further, the percentage increase was greater for men than women - 7.0% versus 6.7%. Average salaries were higher for men than women at every rank. The salary gaps ranged from $1,100 for instructors to $3,854 for professors. In terms of numbers, men predominate at the higher ranks, whereas women predominate at the lower ranks. The net effect of this is to create for all ranks combined a greater salary differential than exists for any specific rank. This differential, or gap, has been widening every year (Table 178). The salary gap between men's and women's salaries exists regardless of type of institution as is shown in Table 179.

Professors had the highest average salaries in New Jersey and lecturers in Massachusetts, whereas associate professors, assistant professors and instructors received the highest salaries in Wyoming. Faculty at every rank except lecturer received the lowest salaries in North Carclina. Lecturers received the lowest salaries in Arkansas (Table 180).

• The **National Science Foundation** reports in its **CHARACTERISTICS OF DOCTORAL SCIENTISTS AND ENGINEERS IN THE UNITED STATES 1981** that doctoral engineers were paid the highest median salaries by educational institutions ($36,400) while doctoral sociologists/anthropologists were paid the lowest ($28,400). Among all employed doctoral scientists and engineers, only 31.8% of engineers were employed in educational institutions (the lowest proportion of any field), compared with 84.4% of sociologists/anthropologists. Table 181 compares the median salaries of doctoral scientists and engineers employed in educational institutions from 1977 through 1981.

Among those doctoral scientists and engineers employed by educational institutions who are college teachers, engineers again reported the highest salaries regardless of academic rank or length of contract, except for professors in medical science on 12-month contracts who received higher salaries (Table 182).

• The 26th annual survey on the **Economic Status of Teachers** by the **American Mathematical Society** is based on returns from 781 departments in the mathematical sciences. Table 184 shows that doctoral mathematics teachers employed in doctorate granting departments earn more than those employed in non-doctorate granting departments. Additionally, the more prestigious the doctoral granting department, generally the higher salaries paid the faculty. As expected, non-doctoral degree mathematics teachers earn less than those with a doctorate regardless of type of institution (Table 183).

• The **American Chemical Society's SALARIES 1983** found that chemists employed in colleges and universities earn less than those employed in other sectors of the economy. Private institutions pay higher salaries to professors and assistant professors while public institutions pay more to instructor/lecturers and unranked faculty when the highest degree awarded by the institution is the doctorate. However, public institutions pay higher salaries than do private institutions regardless of rank when the highest degree granted is the baccalaureate (Table 185). Median salaries of Ph.D. chemists by rank and years since receipt of the B.S. are shown in Table 186.

Agricultural/food chemists reported the highest median salary ($38,000) while analytical chemists reported the lowest ($27,950) (Table 187). At both master's and doctoral levels and at every experience level, women chemists were paid less than men chemists working in colleges and universities. Women holding a master's degree reported a median salary of $21,000 compared to $27,000 for men, while doctoral women earned $26,000 compared to $32,000 for men (Table 188).

Biochemists employed at private colleges and universities had higher salaries at doctorate degree granting institutions, but public institutions offering the baccalaureate as the highest degree paid biochemists more than did private institutions (Table 189).

• The annual 1982-83 Survey of Graduate Departments of Psychology conducted by the **American Psychological Association** and the **Council of Graduate Departments of Psychology** reports on data submitted by 386 departments covering 6,504 full-time

faculty. Generally, faculty in doctoral departments in the Middle-Atlantic states reported the highest salaries regardless of rank or length of experience. Salaries ranged from a high of $45,550 for full professors with at least 12 years of experience working in the New England area to a low of $16,000 for lecturers/instructors with less than two years of experience, also working in the New England area (Table 190). Similar information is presented for full-time faculty in U.S. master's departments in Table 191.

Type of psychology department also affected level of salary as shown in Table 192. However, no one type of department consistently paid higher or lower salaries. By employment setting, medical school psychiatry departments consistently pay the highest salaries to professors and associate professors while four-year college psychology departments generally paid the lowest salaries regardless of rank (Table 193). As expected, the longer in rank, the higher the salary as shown in Table 194.

• The **American Geological Institute** in its **SURVEY OF FACULTY SALARIES - 1982**, received responses from 104 departments of geology. Information from that survey is summarized in Table 195.

• The **Engineering Manpower Commission** of the **American Association of Engineering Societies**, as part of its collection of data for the **PROFESSIONAL INCOME OF ENGINEERS** series, collects and publishes data on the **SALARIES OF ENGINEERS IN EDUCATION.** The 1982 median salary paid to all engineers in education increased 9.7% from 1981 to $30,500. The 1982 median salary of engineers employed by engineering schools was $31,200. Naturally, salaries of engineers in academia vary greatly between ranks. The median salary of a professor in an engineering school on a 9-10 month contract increased by 9.5% from $33,600 in 1981 to $36,800 in 1982, while those on a 12-month contract increased 17.8% from 1981 to $37,850. Tables 196 and 197 present median salaries in all engineering schools by rank and years since baccalaurate for faculty on 9 and 12 month contracts respectively.

Faculty in Technology Schools earn lower salaries than do those in engineering schools regardless of rank or years since baccalaureate as shown in Table 198. Type of institution also affects salary, with the highest salaries earned by faculty in engineering schools granting the doctorate degree (Table 199).

• The **1981-82 ENGINEERING FACULTY SALARY SURVEY** conducted by the **University of Florida** finds that professors and associate professors earn the most in the Northeast, while assistant professors earn the most in the Southwest (Table 200). Geographic area also affects salaries paid to administrators in engineering schools as shown in Table 201.

• Average salaries of faculty in chemical engineering increased 11% in 1982-83, according to **1982-83 CHEMICAL ENGINEERING FACULTY SALARY SURVEY**, conducted by the **American Institute of Chemical Engineers.** By geographic area, professors earn more working in the New England area, while associate professors are paid more working in the east north central area. Regardless of rank, faculty earn less working in the east south central area (Table 202).

• Pharmacy faculty salaries rose 7.2% overall in 1982-83, according to the **ANNUAL SURVEY OF FACULTY SALARIES** by the **American Association of Colleges of Pharmacy.** This was the first year since the early 1970's that the changes in salaries have outpaced the changes in the Consumer Price Index - 7.2% versus

6.0%. Generally, senior faculty and administrators in pharmacy/pharmaceutics reported the highest average salaries (Table 203). Salaries ranged from a high of $59,030 for deans with 16-20 years in rank to a low of $22,416 for instructors with 2-5 years in rank (Table 204).

• Business school faculty got only a modest salary increase in 1982-83 reports the **American Assembly of Collegiate Schools of Business** in its **AACSB SALARY SURVEY.** Topping the salary schedule are professors of finance at $39,600, up 5.3% over 1981. By discipline, business education faculty reported the lowest average salaries regardless of rank (Table 205).

Administrative personnel on business faculties earn higher salaries in private institutions at the levels of dean and associate dean, but lower ones at the levels of assistant dean and chairperson. Salaries are also higher in accredited institutions than in non-accredited institutions (Table 206).

• Data collected by the **College and University Personnel Association** for its **1982-83 ADMINISTRATIVE COMPENSATION SURVEY** finds that salaries of academic administrators vary substantially for the same position in public and private institutions. In general, private institutions pay less than public ones and some academic deans earn substantially more than do chief administrators regardless of type of institution. As in previous years, heading the salary list is the dean of medicine with a median overall salary of $86,700, followed by the dean of dentistry at $70,000. This compares to the median salary of $66,725 paid to the chief executive officer of a complete university system (Table 207).

Regardless of position, women receive lower salaries than men in similar positions. Some of this discrepancy can be explained by the fact that women's average years of service in their present position is 36.9% lower than men's. Minority salaries averaged 37.2% lower than non-minority salaries. However, their average years of service in their present positions is 19.8% lower than for non-minority incumbents. Median salaries paid to administrative officers by position, minority/non-minority status and sex are shown in Table 208.

• The **National Education Association** in its **ESTIMATES OF SCHOOL STATISTICS 1982-83** collects data on average annual salaries of elementary and secondary instructional staff by state. As was true in previous surveys, regardless of school level, classroom teachers were paid the highest salaries in Alaska and the lowest in Mississippi (Table 209).

SOURCE: College and University Personnel Association, National Faculty Salary Survey by Discipline and Rank in State Colleges and Universities, 1982-83.

TABLE 165

AVERAGE FACULTY SALARIES IN STATE COLLEGES AND UNIVERSITIES[a] BY DISCIPLINE (MAJOR FIELD) AND RANK, 1982-83

DISCIPLINE	RANK											
	Professor		Associate Professor		Asst. Professor		New Asst. Prof.		Instructor		All Ranks	
	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary
AGRICULTURE	109	$31,986	94	$25,539	90	$22,748	18	$22,125	26	$17,040	319	$26,261
ARCHITECTURE	46	33,839	23	25,865	41	24,538	4	22,250			110	28,704
AREA STUDIES	30	31,481	47	27,228	39	21,662	6	20,481	15	19,083	131	25,612
BIOLOGICAL SCIENCES	1,010	32,515	755	25,859	436	21,106	58	19,849	57	16,842	2,258	27,691
Botany	39	29,935	18	25,479	15	24,571			4	19,894	76	27,292
Zoology	34	31,624	12	24,292	22	20,063					68	26,590
BUSINESS AND MANAGEMENT	465	35,134	565	28,886	551	24,721	93	24,244	241	18,510	1,822	27,848
Accounting	302	35,958	372	29,740	405	24,760	70	24,845	213	19,033	1,292	27,867
Business Economics	227	34,081	231	27,461	253	23,123	54	23,134	49	18,167	760	27,394
Business Mgmt. & Admin.	481	34,211	493	28,519	524	23,772	120	23,816	254	18,541	1,752	27,215
Insurance	19	38,694	21	29,505	18	24,481	5	27,480	5	17,300	63	29,872
Labor & Industrial Relations	8	33,993	4	26,850	5	22,898	1	21,000	1	17,100	18	28,385
Marketing & Purchasing	39	36,502	35	30,485	34	25,346	8	25,571	12	18,566	120	29,792
Personnel Management	4	32,784	6	26,404	5	24,058	1	24,400	1	18,000	16	26,740
Real Estate	30	36,823	20	28,641	21	25,889	5	28,790	3	18,167	74	30,752
Secretarial Studies	65	32,257	65	26,644	103	21,560	11	20,380	33	16,776	266	24,823
COMMUNICATIONS	185	31,670	263	25,379	270	20,734	45	19,437	136	16,414	854	23,845
Communication Media	21	32,333	24	26,374	34	21,543	6	19,173	10	16,420	89	24,816
Journalism (Printed Media)	72	32,510	96	26,416	111	21,938	13	20,808	53	18,752	332	25,017
COMPUTER & INFORMATION SCIENCE	170	33,851	270	28,645	296	24,271	62	23,592	192	18,853	928	26,177
EDUCATION	1,436	32,031	1,249	26,391	976	21,690	84	19,976	279	17,097	3,940	26,624
Curriculum & Instruction	202	32,621	201	26,652	140	22,058	14	20,843	36	17,622	579	27,062
Elementary Education	345	31,773	282	26,588	202	21,947	22	19,260	29	17,827	858	27,284
Higher Education	97	33,522	52	26,641	11	20,877	2	18,000	1	23,665	161	30,374
Reading Education	53	30,950	49	24,940	41	21,315	8	18,702	10	18,839	153	25,651
Secondary Education	198	30,950	130	26,120	66	21,960	6	21,013	8	17,958	402	27,653
Special Education	223	31,915	256	25,837	233	21,372	27	20,132	48	18,166	760	25,767
Student Personnel	200	31,943	107	25,664	70	21,648	14	20,278	6	16,755	383	28,069
Vocational & Technical Ed.	183	31,903	194	26,588	160	22,162	17	20,637	50	18,338	587	26,335
ENGINEERING	645	35,269	568	28,584	398	24,504	83	24,794	91	20,344	1,702	29,722
FINE & APPLIED ARTS	420	30,383	478	24,327	391	20,218	42	18,849	89	17,184	1,378	24,545
Applied Design	39	33,737	41	27,000	27	22,196	2	22,896	14	17,314	121	26,979
Art	164	30,642	193	24,623	160	20,017	17	19,046	27	16,957	544	24,702
Dance	9	33,079	17	25,406	33	19,888	5	17,861	16	15,977	75	21,887
Dramatic Arts	173	32,802	153	25,587	226	19,974	31	18,901	58	17,486	610	24,783
Music (Liberal Arts)	695	31,577	716	25,309	648	21,092	54	19,667	191	17,386	2,250	25,358
FOREIGN LANGUAGES	473	31,876	527	25,581	401	21,297	21	18,544	98	16,932	1,499	25,855

SOURCE: College and University Personnel Association, National Faculty Salary Survey by Discipline and Rank in State Colleges and Universities, 1982-83.

TABLE 165 (continued)

AVERAGE FACULTY SALARIES IN STATE COLLEGES AND UNIVERSITIES* BY DISCIPLINE (MAJOR FIELD) AND RANK, 1982-83

DISCIPLINE	RANK											
	Professor		Associate Professor		Asst. Professor		New Asst. Prof.		Instructor		All Ranks	
	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary
HEALTH PROFESSIONS	82	$31,428	142	$26,553	236	$21,711	26	$21,083	95	$19,016	555	$23,924
Hospital & Healthcare Admin.	11	31,363	11	27,517	20	19,573	1	21,307	7	19,955	49	24,058
Nursing (Baccalaureate & Higher)	110	31,625	424	25,597	989	21,405	106	20,285	475	17,979	1,998	21,864
Speech Pathology & Audiology	121	32,028	111	25,932	106	21,447	9	21,758	54	18,028	392	25,512
HOME ECONOMICS	135	32,269	196	26,078	311	21,445	33	20,812	129	17,337	771	23,830
INTERDISCIPLINARY STUDIES	34	30,075	54	26,040	41	20,758	4	17,813	3	19,465	132	25,289
LETTERS	310	31,631	275	25,215	259	20,821	21	19,230	99	15,746	943	25,123
English	1,210	32,162	1,168	25,374	937	21,006	79	18,625	443	15,742	3,758	25,335
LIBRARY SCIENCE	40	32,760	96	26,150	138	21,373	11	20,235	31	17,261	305	23,952
MATHEMATICS	987	32,914	947	26,719	827	22,036	112	21,341	335	16,369	3,096	26,323
PHYSICAL SCIENCES												
Chemistry	774	32,653	408	26,250	274	21,640	56	19,938	34	16,747	1,490	28,511
Geology	248	32,855	153	26,401	126	21,913	31	21,232	21	16,433	548	27,908
Physical Science	269	31,620	200	26,005	101	21,755	17	20,332	18	17,276	588	27,576
Physics	477	33,588	332	26,809	150	21,944	25	21,416	27	17,404	986	29,090
PSYCHOLOGY	1,000	32,957	846	26,004	509	20,767	66	19,457	53	17,036	2,408	27,587
PUBLIC AFFAIRS & SERVICES	49	31,868	101	26,200	123	21,856	10	20,930	18	18,137	291	24,819
SOCIAL SCIENCES	337	31,917	350	25,338	275	21,208	30	19,790	38	17,850	1,000	26,135
Anthropology	137	32,797	121	26,232	87	20,682	9	17,990	2	17,350	347	27,381
Geography	280	32,801	230	26,252	164	21,753	18	21,879	21	17,609	695	27,568
History	1,022	32,307	679	25,537	277	21,430	23	19,367	31	16,657	2,009	28,277
International Relations	4	32,571	6	24,293	2	17,399			1	24,500	13	25,795
Political Sci. & Government	467	32,589	419	25,830	290	20,874	43	19,337	33	17,210	1,209	27,016
Sociology	412	33,075	553	26,048	453	20,961	46	18,705	53	17,296	1,471	26,134
THEOLOGY	24	32,551	7	25,322	5	18,679					36	29,218
ALL DISCIPLINES	17,451	32,632	16,456	26,334	14,156	21,818	1,805	21,145	4,377	17,519	52,440	26,475

* Includes 227 institutions. NOTE: Blanks indicate no respondents.

SOURCE: College and University Personnel Association, National Faculty Salary Survey by Discipline and Rank in Private Colleges and Universities, 1982-83.

TABLE 166

AVERAGE FACULTY SALARIES FOR PRIVATE COLLEGES AND UNIVERSITIES[a] BY DISCIPLINE (MAJOR FIELD) AND RANK, 1982-83

DISCIPLINE	RANK											
	Professor		Associate Professor		Asst. Professor		New Asst. Prof.		Instructor		All Ranks	
	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary
AGRICULTURE	6	$28,719	9	$22,089	16	$19,816	3	$22,900	22	$14,427	53	$18,972
ARCHITECTURE	47	34,208	43	27,851	42	20,499	15	20,700	8	18,812	140	27,263
Environmental Design	11	26,262	10	28,520	7	22,296	1	17,000			28	26,077
AREA STUDIES	28	38,653	23	27,382	21	24,120	5	22,800	3	21,405	75	30,437
BIOLOGICAL SCIENCES	441	30,987	366	23,681	335	19,737	40	18,058	58	15,393	1,200	24,864
Botany	16	31,066	14	22,926	9	18,836			2	18,600	41	24,994
Zoology	28	27,403	30	22,918	18	17,957	3	18,367	3	17,854	79	23,185
BUSINESS AND MANAGEMENT	263	36,690	346	28,551	360	24,275	50	23,422	94	18,034	1,063	28,186
Accounting	117	37,379	192	29,603	278	24,026	44	21,758	70	18,212	657	27,414
Business Economics	167	37,465	201	27,777	245	23,456	46	22,848	62	18,882	675	27,788
Business Mgmt. & Admin.	247	36,390	358	28,834	423	23,684	74	23,838	132	18,059	1,160	27,338
Insurance	5	42,620	4	31,825	4	29,500	1	28,000	2	15,165	15	32,582
Labor & Industrial Relations	8	33,668	2	30,750	1	39,700					11	33,686
Marketing & Purchasing	5	31,873	3	28,570	5	24,931	1	21,500	1	25,428	14	28,225
Personnel Management	1	31,856	8	27,644	5	25,097					14	27,035
Secretarial Studies	6	22,876	25	21,939	48	17,692			21	13,926	100	18,273
COMMUNICATIONS	76	31,064	117	25,404	176	19,924	20	18,079	72	14,923	441	22,481
Communication Media	12	34,619	19	26,692	36	20,672	2	19,000	12	17,363	79	23,736
Journalism (Printed Media)	28	31,269	41	27,837	53	19,424	11	18,532	17	16,434	139	23,926
COMPUTER & INFORMATION SCI.	91	36,483	123	28,439	196	23,394	49	22,399	86	18,512	496	26,200
EDUCATION	350	29,693	398	23,469	394	19,733	30	18,103	91	16,143	1,233	23,501
Curriculum & Instruction	22	36,102	35	28,806	19	20,924	4	22,500	2	14,857	78	28,586
Elementary Education	54	25,941	62	21,945	83	17,894	4	16,633	26	14,292	225	20,525
Higher Education	7	28,268	5	26,333	8	22,399	1	22,000			20	25,436
Reading Education	14	32,299	15	26,128	21	17,283	3	20,100	12	14,043	62	22,186
Secondary Education	27	26,911	45	22,251	26	18,154	3	16,333	2	14,150	100	22,282
Special Education	25	29,912	36	22,505	54	17,819	2	17,000	16	16,100	131	21,204
Student Personnel	18	30,769	34	25,092	17	21,605	4	19,643	3	15,792	72	25,300
Vocational & Technical Ed.	4	22,652	7	20,802	3	19,908			2	15,612	16	20,447
ENGINEERING	613	41,179	417	29,923	332	26,860	51	26,533	45	20,621	1,407	33,806
FINE & APPLIED ARTS	142	28,871	247	23,187	216	18,898	28	18,997	52	15,807	657	22,421
Applied Design	26	26,662	27	23,028	35	18,466	2	16,000	8	14,667	96	21,652
Art	68	28,996	66	22,032	79	18,025	12	17,250	15	14,722	228	22,239
Dance	10	29,054	12	21,360	22	18,816	1	19,000	8	14,655	52	20,732
Dramatic Arts	67	29,235	80	23,957	159	18,754	30	18,691	53	14,761	359	21,280
Music (Liberal Arts)	366	28,330	358	22,563	438	18,623	43	18,148	129	15,495	1,291	22,155
FOREIGN LANGUAGES	363	31,445	469	24,343	446	19,635	49	16,941	105	15,491	1,283	24,016
HEALTH PROFESSIONS	210	51,477	296	40,869	426	31,283	52	36,406	111	22,044	1,045	37,093
Hospital & Healthcare Admin.	8	33,229	14	30,039	18	23,378	5	23,880	4	16,679	44	26,680
Nursing (Baccalaureate & Higher)	71	29,334	269	23,716	673	19,082	55	18,726	380	15,742	1,393	19,588
Speech Pathology & Audiology	17	33,398	43	24,952	39	19,832	5	20,189	16	16,633	115	23,307

SOURCE: College and University Personnel Association, National Faculty Salary Survey by Discipline and Rank in Private Colleges and Universities, 1982-83.

TABLE 166 (continued)

AVERAGE FACULTY SALARIES FOR PRIVATE COLLEGES AND UNIVERSITIES* BY DISCIPLINE (MAJOR FIELD) AND RANK, 1982-83

DISCIPLINE	RANK											
	Professor		Associate Professor		Asst. Professor		New Asst. Prof.		Instructor		All Ranks	
	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary
HOME ECONOMICS	19	$27,809	52	$22,293	78	$18,423	2	$18,750	44	$15,002	193	$19,610
INTERDISCIPLINARY STUDIES	22	30,332	30	23,038	30	19,348	4	16,902	14	16,573	96	22,613
LETTERS	190	30,737	171	24,136	148	19,492	20	17,783	24	14,785	533	24,778
English	621	30,917	619	23,591	549	19,001	64	17,061	153	15,327	1,942	23,985
LIBRARY SCIENCE	28	32,876	40	25,703	54	18,796	4	19,125	16	14,912	138	23,204
MATHEMATICS	466	33,970	459	24,967	470	20,612	72	20,641	131	16,191	1,526	25,621
PHYSICAL SCIENCES												
Chemistry	492	32,127	284	24,188	231	19,698	48	18,975	33	14,794	1,040	26,648
Geology	69	36,502	39	26,519	54	21,496	14	21,293	6	18,789	168	28,729
Physical Science	167	39,245	91	27,866	66	22,900	7	20,786	13	15,617	337	32,059
Physics	345	35,521	164	26,430	149	21,184	20	20,606	19	16,090	677	29,618
PSYCHOLOGY	449	31,698	425	24,612	398	19,592	65	19,061	37	15,701	1,309	25,264
PUBLIC AFFAIRS & SERVICES	7	37,495	12	26,090	22	20,318	1	19,000	5	14,518	46	23,807
SOCIAL SCIENCES	199	35,899	239	24,645	246	20,519	16	18,508	54	15,516	738	25,636
Anthropology	56	36,498	72	25,909	48	20,354	8	18,090	2	14,760	178	27,617
Geography	34	35,248	42	26,341	24	21,231	1	18,000	3	16,500	103	27,804
History	512	30,895	385	24,751	243	19,307	35	18,629	26	15,264	1,166	26,102
International Relations	42	37,188	20	29,203	10	23,552					72	33,076
Political Sci. & Government	253	32,413	233	25,631	222	20,195	44	18,552	35	17,389	743	25,928
Sociology	217	32,514	282	24,119	297	19,312	33	18,841	37	15,772	833	24,211
THEOLOGY	358	28,807	331	23,757	284	19,402	28	18,642	66	15,700	1,039	23,795
ALL DISCIPLINES	8,631	33,391	8,861	25,718	9,409	21,033	1,235	20,723	2,463	16,474	29,364	25,697

* Includes 299 institutions. NOTE: Blanks indicate no respondents.

SOURCE: The Chronicle of Higher Education, March 16, 1983.

TABLE 167

AVERAGE ANNUAL EARNINGS ABOVE BASE SALARY AND AVERAGE PERCENT OF BASE SALARY OF FACULTY MEMBERS BY DISCIPLINE, RANK AND TYPE OF INSTITUTION, 1982-83

DISCIPLINE AND RANK	Private Institutions Granting Graduate Degrees		Private Institutions Granting Only Bachelor's Degrees		Public 4-Year Institutions		Public 2-Year Institutions	
	Average Earnings	Avg. % of Base Salary	Average Earnings	Avg. % of Base Salary	Average Earnings	Avg. % of Base Salary	Average Earnings	Avg. % of Base Salary
ARTS[1]								
Professor	$6,833	7.8%	$1,468	7.8%	$4,091	14.3%	$	%
Associate Professor	4,395	24.7	4,183	23.9	4,579	20.2		
Assistant Professor	3,296	16.9	4,192	30.7	3,739	20.3		
All Ranks*	5,783	23.8	2,634	19.2	4,151	22.8	3,418	21.5
BUSINESS & ECONOMICS								
Professor	25,232	63.8	4,800	19.9	11,521	31.4		
Associate Professor	8,674	31.6			7,344	33.4		
Assistant Professor	9,005	41.4	7,109	39.1	3,080	17.1		
All Ranks*	12,109	43.5	6,430	33.8	7,142	28.4	8,490	30.4
ENGINEERING & COMP. SCI.								
Professor	15,958	42.2			12,179	34.7		
Associate Professor	10,060	36.4	1,763	9.6	7,624	28.1		
Assistant Professor	5,911	27.1			5,597	24.4		
All Ranks*	11,984	36.6			9,327	30.4	4,842	20.2
HUMANITIES[2]								
Professor	3,449	10.5	1,341	8.2	3,764	18.1		
Associate Professor	2,531	15.8	1,333	8.8	2,531	15.8		
Assistant Professor	1,727	13.8	1,693	10.7	1,670	13.4		
All Ranks*	2,525	14.9	1,539	10.7	2,553	15.5	2,866	17.5
PHYSICAL EDUCATION, COACHING & RECREA.								
Professor			3,800	14.5	7,160	25.4		
Associate Professor	7,350	33.1	8,228	27.0	3,534	15.8		
Assistant Professor	2,182	12.4	2,177	14.5	3,320	16.8		
All Ranks*	4,097	19.0	3,890	16.6	4,684	19.9	4,248	17.6
SCIENCE & MATHEMATICS								
Professor	4,344	17.4	5,930	26.9	6,579	21.5		
Associate Professor	6,622	26.3	2,863	16.5	4,820	20.3		
Assistant Professor	5,044	27.3	2,553	15.4	5,208	25.4		
All Ranks*	6,062	23.5	3,547	18.8	5,668	21.8	5,245	23.2
SOCIAL SCIENCES & EDUC.								
Professor	5,602	21.4	1,738	12.2	4,104	16.2		
Associate Professor	3,820	19.9	4,828	26.9	5,409	30.1		
Assistant Professor	4,170	23.0	3,793	28.9	3,061	20.2		
All Ranks*	4,702	23.4	3,257	24.0	4,372	22.5	4,271	21.5

1 Includes architecture, cinema, dance, music and theater.
2 Includes classics, English, languages, journalism, literature, philosophy, religion and speech.
* Includes faculty members without rank.

SOURCE: The Chronicle o. Higher Education, March 16, 1983.

TABLE 167 (continued)

AVERAGE ANNUAL EARNINGS ABOVE BASE SALARY AND AVERAGE PERCENT OF BASE SALARY OF FACULTY MEMBERS BY DISCIPLINE, RANK AND TYPE OF INSTITUTION, 1982-83

DISCIPLINE AND RANK	Private Institutions Granting Graduate Degrees		Private Institutions Granting Only Bachelor's Degrees		Public 4-Year Institutions		Public 2-Year Institutions	
	Average Earnings	Avg. % of Base Salary	Average Earnings	Avg. % of Base Salary	Average Earnings	Avg. % of Base Salary	Average Earnings	Avg. % of Base Salary
VOCATIONAL EDUCATION[3]								
Professor	$6,790	21.1%	$	%	$7,638	23.6%	$	%
Associate Professor	3,075	13.8			4,420	19.2		
Assistant Professor	1,655	9.3			3,304	16.8		
All Ranks*	2,579	11.5	2,215	13.9	4,574	19.6	5,343	26.3
ALL DISCIPLINES								
All Faculty Members*	5,675	23.7	3,024	18.7	4,802	21.8	4,841	22.6

[3] Includes agriculture, electronic and engineering technology, health, home economics, nursing, occupational and physical therapy and textiles. * Includes faculty members without rank.

NOTE: Earnings above base salary at two-year public institutions are reported for All Ranks only. Other blanks indicate too few data for reliable estimate.

SOURCE: Office of Institutional Research, Oklahoma State Univ., 1982-83 Faculty Survey by Discipline.

TABLE 168

FACULTY SALARIES AT STATE UNIVERSITIES AND LAND GRANT COLLEGES, 1982-1983

DISCIPLINE	Professor	Assoc. Professor	Asst. Professor	New Asst. Professor*	Instructor	All Ranks
Agriculture & Natural Resources	$34,743	$27,509	$23,183	$23,103	$17,277	$29,723
Architecture & Environ. Design	36,321	28,551	22,887	21,100	19,545	29,329
Area Studies	35,323	26,445	21,169	18,833	18,173	28,757
Biological Sciences	37,698	28,271	23,679	22,305	17,985	31,658
Business & Management	41,647	32,844	28,304	28,319	20,372	33,841
Communications	35,139	27,241	22,143	21,155	17,345	27,127
Computer & Information Science	41,791	32,288	27,739	26,233	21,118	32,834
Education	34,912	27,314	21,828	20,776	18,018	27,998
Engineering	40,619	31,534	27,644	27,429	19,747	34,827
Fine & Applied Arts	33,036	25,232	20,023	18,773	16,578	26,203
Foreign Languages	36,165	26,142	20,607	18,257	17,670	27,288
Health Professions	41,913	32,007	26,236	26,610	20,686	31,401
Home Economics	35,617	27,615	22,557	22,522	17,888	25,990
Interdisciplinary Studies	37,373	26,946	21,167	21,316	18,515	27,890
Law	50,447	37,157	33,282	31,738	23,619	45,123
Letters	35,824	25,987	20,385	18,858	15,826	27,020
Library Science	37,268	29,066	23,226	21,945	19,746	30,309
Mathematics	38,390	28,045	22,269	21,453	17,019	30,757
Physical Sciences	38,826	28,381	23,130	22,208	18,343	33,422
Psychology	37,718	27,169	20,983	18,874	19,371	30,505
Public Affairs & Services	38,092	29,612	23,530	22,301	19,612	29,856
Social Sciences	37,498	27,394	21,763	20,643	18,729	30,070
Technical & Occupational Curric.	36,002		23,271	18,351	18,392	25,221
ALL DISCIPLINES	38,126	28,550	23,677	22,991	18,597	30,631

* Includes only those hired for the first time in the fall of 1982. Blanks indicate data not available.

SOURCE: The Chronicle of Higher Education, January 19, 1983.

TABLE 169

AVERAGE SALARIES AND PERCENT INCREASE OF FACULTY MEMBERS ON 9-10 MONTH CONTRACTS IN ALL INSTITUTIONS BY FIELD AND RANK, 1982-83

FIELD	PROFESSOR		ASSOCIATE PROFESSOR		ASSISTANT PROFESSOR		ALL RANKS	
	Salary	% Increase	Salary	% Increase	Salary	% Increase	Salary	% Increase
Arts, Fine and Applied	$31,275	6.3%	$24,114	7.5%	$19,592	8.4%	$24,828	7.0%
Business and Economics	32,754	6.3	27,861	7.6	24,022	7.2	28,229	6.8
Engineering and Computer Science	36,367	7.5	28,812	9.7	24,343	10.4	30,381	8.5
Humanities, Language, Literature, Communications	32,088	7.2	24,062	7.9	19,256	6.8	24,776	7.2
Physical Education	29,533	5.9	24,338	7.0	20,644	7.8	24,673	6.7
Science and Mathematics	31,876	6.4	25,829	7.3	21,458	9.4	26,189	6.8
Social Sciences	32,451	7.4	24,729	9.6	19,874	7.6	26,756	8.9
Vocational Education, Home Economics, Nursing and Health	31,368	4.4	25,303	6.6	20,911	8.4	23,406	6.6

TABLE 170

AVERAGE SALARIES OF FACULTY MEMBERS (ALL RANKS COMBINED) BY FIELD AND TYPE OF INSTITUTION, 1982-83

FIELD	TYPE OF INSTITUTION					
	All Institutions	All Public	All 4-Year	4-Year Public	4-Year Private	2-Year Public
Arts, Fine and Applied	$24,828	$25,534	$24,950	$25,461	$22,829	$25,712
Business and Economics	28,229	28,029	29,660	29,868	28,769	23,549
Engineering and Computer Science	30,381	30,337	31,478	31,711	30,507	26,988
Humanities, Language, Literature, Communications	24,776	25,182	25,439	25,875	23,627	23,493
Physical Education	24,673	25,059	25,129	25,502	23,580	23,980
Science and Mathematics	26,189	26,004	26,586	26,556	26,712	24,659
Social Sciences	26,756	27,286	27,471	28,072	24,971	25,714
Vocational Education, Home Economics, Nursing and Health	23,496	24,661	24,665	25,823	19,855	21,829

SOURCE: The Chronicle of Higher Education, January 26, 1983.

TABLE 171

AVERAGE SALARIES AND PERCENT INCREASE OF FACULTY MEMBERS BY DISCIPLINE AND SEX, 1982-83

DISCIPLINE	MEN		WOMEN	
	Salary	% Increase*	Salary	% Increase*
Arts, Fine and Applied	$24,456	7.4%	$22,657	7.6%
Business and Economics	29,040	6.7	22,083	7.4
Engineering & Computer Science	30,313	8.5		
Humanities, Language, Literature & Communications	25,494	6.7	22,184	7.9
Physical Education	25,768	6.1	22,903	7.6
Science & Mathematics	27,850	6.9	22,601	8.7
Social Sciences	26,896	9.6	25,177	7.0
Vocational Education, Home Economics, Nursing & Health	24,310	6.0	21,667	6.0

* Increase of average salary for 1982-83 over average for 1981-82, and the women's rate of increase as a percentage of men's rate.

TABLE 172

FACULTY SALARIES BY TYPE OF INSTITUTION, CONTROL AND SEX, 1982-83

TYPE OF INSTITUTION	CONTROL								
	PUBLIC INSTITUTIONS			PRIVATE INSTITUTIONS			ALL INSTITUTIONS		
	Men	Women	Women's as % of Men's	Men	Women	Women's as % of Men's	Men	Women	Women's as % of Men's
Ph.D.-Granting Institutions	$29,602	$24,333	82.2%	$35,506	$24,013	67.6%	$31,668	$24,221	76.5%
Comprehensive Institutions*	26,045	23,679	90.9	23,630	20,447	86.5	25,678	23,188	90.3
Institutions Granting Bachelor's Degree Only				22,710	18,747	82.5	22,710	18,747	82.5
Two-Year Colleges	24,609	23,234	94.4				24,609	23,234	94.4
All Institutions	26,751	23,756	88.8	29,074	21,630	74.4	27,357	23,201	84.8

* Institutions with more than 1,500 students, a liberal arts program, and at least one professional program.

SOURCE: American Association of University Professors, The Annual Report on the Economic Status of the Profession, 1982-83, Special Issue.

TABLE 173

WEIGHTED AVERAGE SALARIES OF FACULTY BY ACADEMIC RANK, CATEGORY* AND TYPE OF AFFILIATION, 1982-83

ACADEMIC RANK	ALL COMBINED		PUBLIC		PRIVATE INDEP.		CHURCH-RELATED	
	Average Salary	% Incr. over 1981-82	Average Salary	% Incr. over 1981-82	Average Salary	% Incr. over 1981-82	Average Salary	% Incr. over 1981-82
CATEGORY I								
Professor	$39,380	6.7%	$38,180	5.9%	$43,950	9.2%	$38,710	9.4%
Assoc. Professor	28,700	6.6	28,310	6.1	30,440	8.7	29,290	8.4
Ass't. Professor	23,440	7.2	23,170	6.6	24,530	9.7	23,690	8.4
Instructor	18,060	6.8	17,550	6.5	19,970	7.8	19,880	8.5
Lecturer	20,500		20,420		21,090		19,360	
All Ranks	31,010	6.8	30,260	6.1	34,350	9.1	29,840	8.8
CATEGORY II-A								
Professor	33,480	4.9	33,490	4.6	33,750	6.3	32,890	6.8
Assoc. Professor	26,720	5.7	26,770	5.2	26,800	7.9	26,080	7.5
Ass't. Professor	21,910	6.1	22,040	5.7	21,590	7.7	21,380	7.2
Instructor	17,580	6.2	17,660	5.6	17,230	9.4	17,350	8.4
Lecturer	18,540		18,010		20,220		21,890	
All Ranks	26,790	5.5	26,940	5.0	26,440	7.3	25,800	7.2
CATEGORY II-B								
Professor	29,320	7.0	30,770	5.9	32,410	8.1	26,130	6.8
Assoc. Professor	23,580	6.8	25,530	6.3	24,370	8.1	21,710	6.5
Ass't. Professor	19,650	6.9	21,550	6.9	19,900	7.3	18,220	6.6
Instructor	16,720	7.3	18,240	7.5	16,940	8.4	15,580	6.5
Lecturer	18,610		18,610		21,020		15,050	
All Ranks	22,890	6.9	24,490	6.5	24,340	7.9	20,860	6.6
CATEGORY II-C								
Professor	32,380	7.7	37,970	8.0	33,260	8.2	23,330	5.8
Assoc. Professor	26,280	7.0	29,530	6.9	25,880	7.8	20,180	4.8
Ass't. Professor	21,960	8.0	24,620	9.4	21,400	7.2	17,690	5.9
Instructor	17,170	3.6	19,070	3.2	17,120	3.8	14,740	4.4
Lecturer	18,700		22,160		13,560		*	
All Ranks	25,840	7.2	29,780	7.8	25,150	7.4	20,290	5.5
CATEGORY III								
Professor	30,080	8.3	30,480	8.4	22,690	4.0	19,750	3.5
Assoc. Professor	25,560	6.3	25,840	6.4	20,640	3.4	18,720	3.2
Ass't. Professor	21,490	6.9	21,840	6.9	17,130	6.0	16,920	7.3
Instructor	18,270	7.2	18,880	7.7	13,500	2.8	13,540	4.8
Lecturer	15,600		16,010		†		†	
All Ranks	23,700	7.1	24,190	7.2	17,290	4.0	16,730	5.3
CATEGORY IV								
No Rank	24,340	5.6	24,960	5.6	15,810	6.3	15,040	5.0

* See original survey for definition of categories. † Too few individuals to be meaningful.

SOURCE: American Association of University Professors, The Annual Report on the Economic Status of the Profession, 1982-83, Special Issue.

TABLE 174

WEIGHTED AVERAGE COMPENSATION OF FACULTY BY ACADEMIC RANK, CATEGORY* AND TYPE OF AFFILIATION, 1982-83

ACADEMIC RANK	ALL COMBINED		PUBLIC		PRIVATE INDEPENDENT		CHURCH-RELATED	
	Average Compensation	% Incr. over 1981-82	Average Compensation	% Incr. over 1981-82	Average Compensation	% Incr. over 1981-82	Average Compensation	% Incr. over 1981-82
CATEGORY I								
Professor	$46,890	7.1%	$45,260	6.3%	$53,080	9.6%	$46,070	9.8%
Associate Professor	34,370	7.2	33,830	6.7	36,730	9.4	35,150	9.3
Ass't. Professor	28,060	7.9	27,750	7.2	29,320	11.0	28,010	9.1
Instructor	21,490	7.4	20,900	7.2	23,720	7.8	23,510	9.4
Lecturer	25,210		25,300		25,190		22,850	
All Ranks	37,030	7.3	36,060	6.6	41,380	9.8	35,540	9.5
CATEGORY II-A								
Professor	40,110	5.3	40,140	4.7	40,610	6.7	38,920	7.4
Assoc. Professor	32,050	6.0	32,130	5.3	33,120	8.2	31,190	8.6
Ass't. Professor	26,140	6.1	26,350	5.6	25,510	8.1	25,380	7.9
Instructor	20,830	6.2	21,000	5.5	20,090	10.0	20,390	8.9
Lecturer	22,460		21,980		23,760		26,100	
All Ranks	32,050	5.6	32,280	5.0	31,570	7.6	30,660	8.0
CATEGORY II-B								
Professor	35,080	7.3	36,340	6.6	39,380	8.3	31,130	6.9
Assoc. Professor	28,110	7.2	30,430	6.9	29,340	8.2	25,720	6.7
Ass't. Professor	23,160	7.2	25,520	7.5	23,630	7.5	21,300	6.9
Instructor	19,440	7.6	21,570	8.2	19,670	8.7	17,890	6.5
Lecturer	22,070		22,130		25,190		17,150	
All Ranks	27,170	7.3	29,030	7.1	29,220	8.1	24,600	6.8
CATEGORY II-C								
Professor	38,460	7.6	43,890	8.3	39,880	7.7	28,780	5.9
Assoc. Professor	31,050	7.0	34,380	7.1	30,920	7.5	24,100	5.0
Ass't. Professor	25,940	9.0	29,230	10.9	25,220	7.4	20,700	7.2
Instructor	20,410	4.6	22,810	4.1	20,400	4.5	17,120	6.3
Lecturer	22,690		27,610		15,480		†	
All Ranks	30,610	7.5	34,820	8.4	29,980	7.2	24,440	6.0
CATEGORY III								
Professor	36,200	8.9	36,710	9.1	27,040	3.7	23,130	4.3
Assoc. Professor	30,620	7.0	30,950	7.1	24,810	3.4	22,170	4.8
Ass't. Professor	25,750	7.4	26,210	7.5	20,160	6.3	19,610	7.1
Instructor	21,860	7.9	22,650	8.3	15,740	3.7	15,680	5.4
Lecturer	18,770		19,220		†		†	
All Ranks	28,420	7.7	29,040	7.9	20,460	4.4	19,500	5.6
CATEGORY IV								
No Rank	28,580	5.9	29,320	5.9	18,340	6.1	17,490	5.1

* See original survey for definition of categories. † Too few individuals to be meaningful.

SOURCE: American Association of University Professors, The Annual Report on the Economic Status of the Profession, 1982-83, Special Issue.

TABLE 175

WEIGHTED AVERAGE SALARIES OF FACULTY BY ACADEMIC RANK, CATEGORY*, TYPE OF AFFILIATION, AND SEX, 1982-83

ACADEMIC RANK	ALL COMBINED		PUBLIC		PRIVATE INDEPENDENT		CHURCH-RELATED	
	Men	Women	Men	Women	Men	Women	Men	Women
CATEGORY I								
Professor	$39,640	$35,670	$38,410	$34,910	$44,310	$38,540	$38,980	$35,640
Assoc. Professor	29,030	27,250	28,620	26,880	30,810	28,900	29,800	27,310
Ass't. Professor	24,010	22,180	23,740	21,900	25,040	23,310	24,390	22,500
Instructor	28,920	17,290	18,260	16,960	20,860	18,840	21,480	18,540
Lecturer	21,810	18,990	21,670	18,910	22,630	19,210	20,750	18,210
CATEGORY II-A								
Professor	33,700	32,010	33,670	32,300	34,140	31,040	33,270	29,800
Assoc. Professor	27,040	25,540	27,060	25,750	27,270	25,100	26,560	24,250
Ass't. Professor	22,430	21,070	22,510	21,270	22,290	20,480	21,950	20,270
Instructor	18,170	17,070	18,190	17,210	18,080	16,490	18,080	16,700
Lecturer	19,640	17,180	18,930	16,890	21,770	17,770	23,700	19,960
CATEGORY II-B								
Professor	29,500	28,070	30,920	29,650	32,560	31,370	26,340	24,310
Assoc. Professor	23,920	22,490	25,770	24,700	24,720	23,400	22,050	20,450
Ass't. Professor	20,110	18,940	21,870	20,950	20,310	19,330	18,650	17,560
Instructor	17,380	16,070	18,850	17,610	17,870	15,860	15,960	15,210
Lecturer	19,730	17,580	19,600	17,510	23,480	19,610	16,120	13,820
CATEGORY II-C								
Professor	34,100	28,180	37,990	31,850	32,240	28,570	23,480	21,940
Assoc. Professor	27,400	23,980	30,220	26,430	26,440	23,910	20,680	20,270
Ass't. Professor	22,960	20,490	25,680	22,500	22,020	20,120	18,190	17,450
Instructor	17,880	16,510	20,830	17,660	17,410	16,900	16,650	14,240
Lecturer	20,520	17,500	24,280	19,770	14,630	13,920	†	†
CATEGORY III								
Professor	30,440	29,280	30,760	29,660	23,580	21,240	20,460	18,300
Assoc. Professor	25,880	25,070	26,110	25,310	21,520	19,840	18,610	19,420
Ass't. Professor	21,860	21,070	22,150	21,400	17,630	16,850	16,670	16,430
Instructor	19,040	17,670	19,450	18,300	14,620	13,000	13,430	13,700
Lecturer	17,220	14,650	17,220	15,240	†	†	†	†
CATEGORY IV								
No Rank	25,340	22,890	25,860	23,450	17,010	14,900	16,230	13,820

* See original survey for definition of categories. † Too few individuals to be meaningful.

SOURCE: American Association of University Professors, The Annual Report on the Economic Status of the Profession, 1982-83, Special Issue.

TABLE 176

AVERAGE SALARY, FRINGE BENEFITS AND COMPENSATION OF FULL-TIME FACULTY MEMBERS IN INSTITUTIONS OF HIGHER EDUCATION BY RANK, 1982-83

ACADEMIC RANK	Average Salary	Average Fringe Benefits	Average Compensation	Fringe Benefits (As a % of Avg.)	
				Salary	Compensation
Professor	$35,470	$6,880	$42,350	19.4%	16.2%
Associate Professor	26,840	5,280	32,120	19.7	16.4
Assistant Professor	21,950	4,220	26,170	19.2	16.1
Instructor	17,640	3,260	20,900	18.5	15.6
Lecturer	19,700	4,350	24,050	22.1	18.1
All Ranks	27,430	5,330	32,760	19.4	16.3
No Rank*	24,340	4,240	28,580	17.4	14.8

* Institutions without professorial ranks.

TABLE 177

NUMBER, AVERAGE SALARY AND AVERAGE COMPENSATION OF FACULTY MEMBERS IN PRECLINICAL DEPARTMENTS OF MEDICAL SCHOOLS BY TYPE OF AFFILIATION AND ACADEMIC RANK, 1982-83

ACADEMIC RANK	ALL COMBINED			PUBLIC			PRIVATE		
	No. of Faculty	Salary	Compensation	No. of Faculty	Salary	Compensation	No. of Faculty	Salary	Compensation
Professor	1,603	$51,420	$61,140	995	$49,110	$58,300	608	$55,190	$65,800
Associate Professor	1,604	38,840	46,140	1,127	38,480	45,510	477	39,690	47,610
Assistant Professor	1,551	30,050	36,940	993	30,700	36,230	558	31,750	38,200
Instructor	851	27,640	31,220	741	26,440	31,860	110	22,280	26,930
All Ranks	5,609	38,590	45,620	3,856	37,290	43,800	1,753	41,450	49,620

SOURCE: National Center for Education Statistics, Bulletin, September 1983.

TABLE 178

AVERAGE SALARIES OF FACULTY BY RANK AND SEX, 1982-83

RANK	MEN		WOMEN		Difference between Men's & Women's Salary
	Salary	Men as % of 9-month Faculty	Salary	Women as % of 9-month Faculty	
Professor	$35,557	88.8	$31,703	11.2	$3,854
Associate Professor	27,006	77.7	25,400	22.3	1,606
Assistant Professor	22,428	63.7	20,928	36.3	1,500
Instructor	18,164	47.3	17,064	52.7	1,100
Lecturer	20,980	52.4	18,347	47.6	2,633
No Academic Rank	26,358	62.8	23,721	37.2	2,637
Total - All Ranks Combined	28,394	72.7	23,020	27.3	5,374

SOURCE: Preliminary Data, National Center for Education Statistics.

TABLE 179

NUMBER AND AVERAGE SALARY OF FULL-TIME INSTRUCTIONAL FACULTY IN HIGHER EDUCATION ON 9-MONTH CONTRACTS BY TYPE OF INSTITUTION, RANK AND SEX, 1982-83

ALL INSTITUTIONS	TYPE OF INSTITUTION					
	Universities		Other 4-Year		2-Year	
	No. of Faculty	Salary	No. of Faculty	Salary	No. of Faculty	Salary
ALL RANKS	88,616	$30,602	149,205	$25,696	70,769	$24,931
Men	71,078	32,152	109,067	26,946	44,349	25,932
Women	17,538	24,320	40,138	22,299	26,420	23,252
Professor	34,308	39,232	45,688	32,715	6,166	30,125
Men	32,015	39,507	39,800	32,986	4,693	30,410
Women	2,293	35,390	5,888	30,890	1,473	29,218
Associate Professor	25,302	28,381	43,810	25,817	8,412	25,757
Men	20,506	28,713	34,079	26,134	5,642	26,066
Women	4,796	26,961	9,731	24,709	2,770	25,129
Assistant Professor	22,673	23,316	43,269	21,171	8,976	21,695
Men	15,490	23,918	27,003	21,633	5,195	22,119
Women	7,183	22,016	16,266	20,405	3,781	21,111
Instructor	3,915	17,871	12,782	17,193	5,565	18,281
Men	1,792	18,669	6,040	17,665	2,695	18,946
Women	2,123	17,198	6,742	16,770	2,870	17,657
Lecturer	2,220	20,256	1,877	19,435	171	16,072
Men	1,165	21,717	1,004	20,371	68	17,349
Women	1,055	18,643	873	18,358	103	15,230
No Academic Rank	198	21,194	1,779	20,190	41,479	25,621
Men	110	22,246	1,141	21,214	26,056	26,601
Women	88	19,880	638	18,359	15,423	23,965

SOURCE: National Center for Education Statistics, Preliminary Information

TABLE 180

NUMBER AND AVERAGE SALARIES OF FULL-TIME INSTRUCTIONAL FACULTY ON 9-10 MONTH CONTRACTS IN ALL INSTITUTIONS OF HIGHER EDUCATION BY STATE AND ACADEMIC RANK, 1982-83

STATE	ACADEMIC RANK											
	No Academic Rank		Professor		Associate Professor		Assistant Professor		Instructor		Lecturer	
	Number	Salary	Number	Salary	Number	Salary	Number	Salary	Number	Salary	Number	Salary
Alabama	982	$21,519	757	$30,807	1,018	$24,426	1,209	$20,414	618	$16,415	20	$16,044
Alaska*												
Arizona	1,424	27,179	1,030	39,681	902	29,426	619	23,779	88	18,429	118	20,039
Arkansas	275	17,735	520	30,027	605	23,997	641	20,529	291	16,726	16	12,716
California	12,222	31,363	11,281	37,724	5,098	27,922	3,650	23,032	479	20,582	604	22,733
Colorado	895	20,642	1,794	33,195	1,346	25,953	1,093	21,820	151	17,920	41	17,497
Connecticut	30	17,265	1,428	37,768	1,291	26,868	1,254	22,534	228	18,691	54	20,789
Delaware	143	22,819	243	39,048	279	27,322	252	21,746	58	17,563	78	17,447
District of Columbia	1		1,076	33,405	948	28,396	906	22,778	238	18,908	82	21,804
Florida	2,171	20,675	2,107	34,657	2,229	25,666	1,948	21,191	617	16,956	63	19,760
Georgia	223	24,411	1,253	34,123	1,643	26,055	1,897	21,303	648	16,441	61	18,674
Hawaii	524	25,789	386	37,167	272	27,706	316	22,703	60	17,774		
Idaho	73	21,943	370	28,640	374	23,755	291	20,343	97	18,254	3	17,375
Illinois	2,609	25,664	4,859	35,139	4,310	26,396	4,175	22,225	1,282	18,299	101	17,190
Indiana	403	16,004	2,412	33,187	2,255	25,706	2,251	20,840	458	16,027	129	18,319
Iowa	379	20,716	1,221	32,718	1,107	25,600	1,283	21,035	559	17,589	1	
Kansas	867	20,742	1,141	32,246	1,052	24,422	1,008	20,574	318	16,502	53	17,628
Kentucky	50	14,687	1,141	30,659	1,392	24,184	1,238	20,013	377	16,457	35	15,074
Louisiana	53	18,400	1,238	32,679	1,472	26,526	1,714	22,019	889	17,416	29	15,849
Maine	254	18,536	386	32,192	462	24,776	420	19,662	95	15,736	56	21,191
Maryland	85	23,552	1,215	34,806	1,151	27,228	1,263	22,467	391	17,912	71	17,314
Massachusetts	344	17,902	3,887	39,734	3,032	28,428	3,255	23,351	808	18,278	172	25,101
Michigan	2,200	27,724	3,739	34,713	2,862	26,751	2,464	22,373	648	18,200	221	19,106
Minnesota	805	25,583	1,660	35,096	1,445	26,737	1,533	21,792	386	17,444	8	19,705
Mississippi	1,114	17,624	505	29,293	605	24,018	765	19,460	320	15,721	2	
Missouri	652	20,218	1,797	32,097	1,660	25,269	1,811	20,573	679	16,629	43	16,393
Montana	99	20,603	411	31,040	401	25,576	359	21,357	69	18,170	17	17,136

*No Data Available

SOURCE: National Center for Education Statistics, Preliminary Information

TABLE 180 (continued)

NUMBER AND AVERAGE SALARIES OF FULL-TIME INSTRUCTIONAL FACULTY ON 9-10 MONTH CONTRACTS IN ALL INSTITUTIONS OF HIGHER EDUCATION BY STATE AND ACADEMIC RANK, 1982-83

STATE	ACADEMIC RANK											
	No Academic Rank		Professor		Associate Professor		Assistant Professor		Instructor		Lecturer	
	Number	Salary	Number	Salary	Number	Salary	Number	Salary	Number	Salary	Number	Salary
Nebraska	287	$19,073	727	$30,820	677	$24,409	709	$20,138	634	$16,479	18	$13,857
Nevada	178	23,948	194	37,780	250	29,366	115	24,106	24	21,151	12	24,777
New Hampshire	13	14,462	467	32,819	452	24,586	479	20,254	109	16,386	43	16,879
New Jersey	28	24,322	2,221	40,030	2,314	29,831	2,536	23,634	591	18,432	127	22,178
New Mexico	143	21,514	457	35,822	451	27,162	497	22,503	103	18,952	47	19,166
New York	341	19,550	7,405	37,715	6,734	28,318	6,417	22.500	1,868	18,016	494	20,701
North Carolina	1,049	16,112	474	26,406	536	21,569	568	17,610	267	14,518	36	20,555
North Dakota	313	22,661	226	31,785	307	26,758	285	22,314	108	18,877	21	18,014
Ohio	847	24,782	3,970	34,672	3,995	26,879	3,493	21,678	1,188	17,709	70	17,962
Oklahoma	901	23,877	958	34,056	854	27,992	1,239	24,121	394	19,983	38	15,839
Oregon	1,453	23,993	606	29,672	641	23,975	455	20,243	108	16,357	6	18,189
Pennsylvania	49	13,613	4,554	34,503	4,935	26,972	4,565	21,000	1,368	17,061	135	17,127
Rhode Island	89	26,121	746	35,641	645	26,674	564	21,997	111	17,713	8	20,563
South Carolina	693	17,929	878	32,005	1,163	23,930	1,090	20,931	408	15,487	25	19,061
South Dakota	62	16,683	303	26,981	312	22,210	380	19,097	212	15,937	1	
Tennessee	140	18,325	1,793	31,241	1,849	24,174	1,737	19,925	610	16,279	30	15,916
Texas	3,288	24,194	4,648	35,913	4,584	27,978	4,870	23,172	1,705	19,099	601	19,062
Utah	239	21,912	681	35,195	498	26,461	442	21,819	126	17,571	22	18,173
Vermont	59	17,807	304	32,031	355	24,379	363	20,243	79	17,539	45	19,471
Virginia	88	15,246	2,209	33,510	2,822	25,681	3,104	21,039	943	16,748	43	19,135
Washington	1,896	24,697	1,073	29,525	950	25,271	631	21,008	159	20,307	13	17,870
West Virginia	1		602	27,505	776	22,814	752	19,116	314	15,648	46	13,067
Wisconsin	2,134	25,682	2,403	34,645	1,893	26,243	1,748	22,205	328	18,874	276	19,021
Wyoming	288	25,197	224	38,772	150	31,396	157	25,365	51	21,311	33	17,664
50 States & D.C.	43,456	25,378	86,162	35,125	77,524	26,647	74,918	21,883	22,262	17,584	4,268	19,727
Outlying Areas Total	114	13,198	483	27,904	617	21,870	799	19,731	649	16,632	30	13,970
U.S. Service Schools			177	42,115	169	33,943	106	26,231	2			

NOTE: Data for the four Health Science Centers of the State University of New York and the City University of New York system are not included.

SOURCE: National Science Foundation, Characteristics of Doctoral Scientists and Engineers in the United States, 1981, NSF 82-332.

TABLE 181

NUMBER AND MEDIAN ANNUAL SALARIES OF DOCTORAL SCIENTISTS AND ENGINEERS EMPLOYED BY EDUCATIONAL INSTITUTIONS BY FIELD, 1977-81

FIELD	1977				1979				1981			
	Number	Percent	% of tot. employed	Median annual salary	Number	Percent	% of tot. employed	Median annual salary	Number	Percent	% of tot. employed	Median annual salary
TOTAL	163,140	100.0	57.4	$23,700	173,966	100.0	55.4	$26,400	186,809	100.0	54.4	$31,100
Physical Scientists	27,089	16.6	47.1	23,600	27,248	15.7	45.3	26,500	28,333	15.2	44.8	31,700
Chemists	14,792	9.1	39.6	22,800	15,134	8.7	38.2	25,400	15,772	8.4	37.6	30,700
Physicists/Astronomers	12,287	7.5	61.0	24,400	12,114	7.0	58.8	27,700	12,561	6.7	59.2	33,500
Mathematical Scientists	12,232	7.5	83.8	22,700	12,606	7.2	82.4	25,500	12,739	6.8	81.7	30,500
Mathematicians	11,022	6.8	85.6	22,600	10,794	6.2	83.5	25,300	11,007	5.9	84.4	30,400
Statisticians	1,210	0.7	70.6	23,200	1,812	1.0	76.6	26,700	1,732	0.9	67.8	31,300
Computer Specialists	2,128	1.3	36.9	24,400	2,457	1.4	36.5	25,400	3,010	1.6	33.3	30,700
Environmental Scientists	6,312	3.9	48.5	23,600	6,182	3.6	42.3	26,700	6,772	3.6	42.2	31,200
Earth Scientists	4,641	2.8	47.5	23,400	4,654	2.7	41.8	26,700	5,019	2.7	41.4	31,600
Oceanographer	971	0.6	62.1	23,600	789	0.5	47.5	26,700	964	0.5	54.1	28,500
Atmospheric Scientists	700	0.4	41.2	25,200	739	0.4	41.0	27,300	789	0.4	37.1	31,500
Engineers	15,911	9.8	35.3	26,500	17,048	9.8	33.9	30,000	18,083	9.7	31.8	36,400
Life Scientists	47,475	29.1	66.0	23,500	52,207	30.0	65.2	26,400	56,787	30.4	65.5	31,000
Biological Scientists	30,833	18.9	73.1	22,800	32,998	19.0	72.1	25,200	35,840	19.2	72.2	29,900
Agricultural Scientists	8,331	5.1	58.3	23,700	8,510	4.9	56.5	27,500	9,147	4.9	57.6	31,400
Medical Scientists	8,311	5.1	53.7	25,800	10,699	6.2	55.5	29,900	11,800	6.3	55.8	35,400
Psychologists	18,581	11.4	55.1	22,700	19,949	11.5	52.5	25,600	21,833	11.7	50.7	29,100
Social Scientists	33,412	20.5	78.2	23,100	36,269	20.8	74.6	25,400	39,252	21.0	74.1	29,700
Economists	7,498	4.6	69.5	25,100	7,679	4.4	65.5	28,300	9,017	4.8	67.2	33,200
Sociologists/Anthropologists	8,547	5.2	90.0	22,100	8,787	5.1	85.9	23,900	9,285	5.0	84.4	28,400
Other Social Scientists	17,367	10.6	77.3	22,700	19,803	11.4	74.2	24,900	20,950	11.2	73.5	29,100

NOTES: Percents may not add to 100 because of rounding.
Median salaries computed for full-time employed civilians only.

SOURCE: National Science Foundation, Characteristics of Doctoral Scientists and Engineers in the United States, 1981, NSF 82-332.

TABLE 182

MEDIAN ANNUAL SALARIES OF DOCTORAL SCIENTISTS AND ENGINEERS WHO ARE UNIVERSITY OR 4-YEAR COLLEGE TEACHERS BY FIELD, SALARY BASE AND ACADEMIC RANK, 1981

FIELD AND SALARY BASE	TOTAL	ACADEMIC RANK			
		Professor	Associate Professor	Assistant Professor	Other
ALL FIELDS					
Academic Year	$25,200	$30,800	$24,000	$19,300	$20,400
Calendar Year	31,900	39,100	30,300	24,700	28,900
PHYSICAL SCIENTISTS					
Academic Year	25,700	30,500	23,600	18,800	
Calendar Year	32,100	36,100	30,300	22,700	27,900
CHEMISTS					
Academic Year	25,100	29,100	23,200	18,600	
Calendar Year	31,600	35,800	30,600	20,000	27,300
PHYSICISTS/ASTRONOMERS					
Academic Year	26,800	31,300	23,700	19,000	
Calendar Year	32,500	36,900	30,000	24,700	
MATHEMATICAL SCIENTISTS					
Academic Year	25,400	30,600	23,900	18,700	
Calendar Year	27,700	36,300	26,900	22,100	
MATHEMATICIANS					
Academic Year	25,400	30,200	23,900	18,400	
Calendar Year	27,600	36,300	26,900	21,100	
STATISTICIANS					
Academic Year	25,700	36,000	24,300	19,800	
Calendar Year	33,600				
COMPUTER SPECIALISTS					
Academic Year	25,200	30,700	24,800	23,100	
Calendar Year	30,600				
ENVIRONMENTAL SCIENTISTS					
Academic Year	25,100	31,500	23,900	19,800	
Calendar Year	30,600	38,200	31,200	21,900	
EARTH SCIENTISTS					
Academic Year	25,200	30,600	23,500	19,600	
Calendar Year	31,500	36,500	31,200		
OCEANOGRAPHERS					
Academic Year	23,900				
Calendar Year	28,000				
ATMOSPHERIC SCIENTISTS					
Academic Year	28,300				
Calendar Year					
ENGINEERS					
Academic Year	$29,100	$34,000	$27,000	$23,200	
Calendar Year	36,900	46,000	33,600	27,400	
LIFE SCIENTISTS					
Academic Year	23,600	28,800	23,000	19,000	
Calendar Year	32,300	41,600	30,800	25,800	30,400
BIOLOGICAL SCIENTISTS					
Academic Year	23,400	28,900	22,700	18,600	
Calendar Year	31,100	43,700	30,500	25,600	27,200
AGRICULTURAL SCIENTISTS					
Academic Year	23,400	28,700		21,000	
Calendar Year	31,900	35,600	29,500	24,000	

SOURCE: National Science Foundation, Characteristics of Doctoral Scientists and Engineers in the United States, 1981, NSF 82-332.

TABLE 182 (continued)

MEDIAN ANNUAL SALARIES OF DOCTORAL SCIENTISTS AND ENGINEERS WHO ARE UNIVERSITY OR 4-YEAR COLLEGE TEACHERS BY FIELD, SALARY BASE AND ACADEMIC RANK, 1981

FIELD AND SALARY BASE	TOTAL	ACADEMIC RANK			
		Professor	Associate Professor	Assistant Professor	Other
MEDICAL SCIENTISTS					
Academic Year	25,300	28,200	25,200	21,700	
Calendar Year	35,800	59,700	33,500	28,000	30,800
PSYCHOLOGISTS					
Academic Year	23,800	30,700	22,500	18,200	
Calendar Year	28,900	38,400	28,800	23,600	23,200
SOCIAL SCIENTISTS					
Academic Year	24,500	30,900	23,900	19,100	
Calendar Year	28,300	37,500	26,400	20,500	23,700
ECONOMISTS					
Academic Year	26,800	32,900	26,700	20,200	
Calendar Year	29,700	38,400			
SOCIOLOGISTS/ ANTHROPOLOGISTS					
Academic Year	23,200	30,400	23,100	18,400	
Calendar Year	26,900	38,500	27,400	20,000	
OTHER SOCIAL SCIENTISTS					
Academic Year	24,100	30,300	22,900	18,800	
Calendar Year	26,700	36,600	25,200	20,300	

NOTE: Includes individuals reporting Teaching as their primary or secondary work activity. All median salaries were computed only for full-time employed civilians.

No median was computed for groups with fewer than 20 individuals reporting salary.

SOURCE: The American Mathematical Society NOTICES, Vol. 29, No. 7, November 1982.

TABLE 183

NUMBER AND MEDIAN SALARY RANGES FOR NON-DOCTORAL DEGREE MATHEMATICS TEACHERS BY RANK AND TYPE OF INSTITUTION, 1981-82 AND 1982-83

TYPE OF INSTITUTION	NON-PH.D. DEGREE RANK	1981-82			1982-83		
		NUMBER OF FACULTY		MEDIAN RANGES	NUMBER OF FACULTY		MEDIAN RANGES
		Total	Women		Total	Women	
Doctorate Granting Departments	Instructor/Lecturer	43	27		36	23	
	Assistant Professor	8	1		5	1	
	Associate Professor						
GROUP II*	Professor	2	0		2	0	
Doctorate Granting Departments	Instructor/Lecturer	133	89	$13,100-17,100	144	90	$13,900-18,400
	Assistant Professor	62	23	18,200-22,100	53	16	19,300-24,200
	Associate Professor	45	8	24,900-29,000	40	5	26,100-30,100
GROUP III*	Professor	15	0		14	0	
Master's Degree Granting Departments	Instructor/Lecturer	290	154	14,200-18,000	289	149	14,700-18,400
	Assistant Professor	245	52	19,500-23,200	253	54	20,700-24,700
	Associate Professor	177	19	22,500-27,200	170	19	23,700-28,500
	Professor	46	5	25,300-34,000	45	5	27,000-34,800
Bachelor's Degree Granting Departments	Instructor/Lecturer	307	153	14,000-16,200	298	143	15,200-18,500
	Assistant Professor	267	54	16,800-21,900	286	62	18,100-23,500
	Associate Professor	240	30	19,700-25,000	236	28	21,000-27,000
	Professor	87	8	24,300-33,600	85	7	25,900-34,400

* Please see footnote on following table.

SOURCE: The American Mathematical Society NOTICES, Vol. 29, No. 7, November 1982.

TABLE 184

NUMBER AND MEDIAN SALARY RANGES FOR DOCTORAL DEGREE MATHEMATICS TEACHERS BY RANK AND TYPE OF INSTITUTION, 1981-82 AND 1982-83

TYPE OF INSTITUTION	RANK	1981-82			1982-83		
		NUMBER OF FACULTY		MEDIAN RANGES	NUMBER OF FACULTY		MEDIAN RANGES
		Total	Women		Total	Women	
Doctorate Granting	Instructor/Lecturer	36	7		30	6	
Departments	Assistant Professor	150	19	$19,500-21,600	150	22	$21,200-22,600
	Associate Professor	130	11	25,300-27,600	124	7	26,000 28,800
GROUP I*	Professor	594	12	36,500-43,600	609	15	38,100-46,000
Doctorate Granting	Instructor/Lecturer	55	10	16,600-19,000	55	9	17,300-21,000
Departments	Assistant Professor	173	18	19,700-22,800	181	19	21,100-24,000
	Associate Professor	355	16	24,600-28,000	337	18	26,300-30,300
GROUP II*	Professor	539	14	33,600-39,700	566	14	36,100-41,900
Doctorate Granting	Instructor/Lecturer	43	5	15,500-19,700	37	2	17,400-20,000
Departments	Assistant Professor	395	41	19,600-21,700	390	39	21,500-24,000
	Associate Professor	621	38	24,200-27,900	605	35	26,000-29,600
GROUP III*	Professor	821	26	30,800-37,700	854	25	33,100-39,200
Doctorate Granting	Instructor/Lecturer	2	2		2	2	
Departments	Assistant Professor	142	21	20,400-24,200	149	22	22,500-25,900
	Associate Professor	90	5	25,500-30,500	92	6	27,700-33,000
GROUP IV*	Professor	267	9	34,700-44,000	271	9	37,300-49,900
Doctorate Granting	Instructor/lecturer	9	5		14	6	
Departments	Assistant Professor	241	18	23,700-26,400	257	21	26,000-29,000
	Associate Professor	192	10	27,300-31,900	195	8	30,700-34,700
GROUP V*	Professor	345	5	36,800-42,500	352	8	39,200-46,000
Doctorate Granting	Instructor/Lecturer	0	0		0	0	
Departments	Assistant Professor	42	3	18,700-28,400	40	4	21,000-32,500
	Associate Professor	124	3	22,900-39,300	116	3	25,400-48,500
GROUP VI*	Professor	136	1	32,300-47,600	150	1	34,300-54,900
Master's Degree	Instructor/Lecturer	35	7		36	6	
Granting	Assistant Professor	506	71	18,500-22,400	548	82	20,300-23,500
Departments	Associate Professor	775	65	23,200-26,400	783	71	24,700-28,500
	Professor	797	48	28,900-34,100	848	54	30,200-36,200
Bachelor's Degree	Instructor/Lecturer	17	3		19	5	
Granting	Assistant Professor	425	78	17,500-20,800	444	88	19,000-22,900
Departments	Associate Professor	549	57	20,900-26,000	562	59	22,400-27,700
	Professor	514	34	25,000-31,300	546	34	26,400-33,300

* Group I and Group II include the leading departments of mathematics in the U.S. as rated by the American Council of Education in 1969 in "A Rating of Graduate Programs" by Kenneth D. Roose and Charles J. Anderson, in which departments were ranked according to the quality of their graduate faculty. Group I is composed of the 27 departments ranked highest; Group II is made up of the other 38 departments listed in that report. Group III contains all other U.S. departments of mathematics. Group IV includes U.S. departments of statistics, biostatistics and biometrics. Group V includes all other U.S. departments in the mathematical sciences. Group VI consists of all departments in the mathematical sciences from Canadian universities.

SOURCE: American Chemical Society, Salaries 1983 - Analysis of the American Chemical Society's 1983 Survey of Salaries and Employment, June 1983.

TABLE 185

MEDIAN ANNUAL SALARIES OF Ph.D CHEMISTS * EMPLOYED FULL-TIME IN COLLEGES AND UNIVERSITIES BY TYPE OF INSTITUTION AND ACADEMIC RANK, 1983

ACADEMIC RANK	TYPE OF INSTITUTION								TOTAL
	PRIVATE				PUBLIC				
	Ph.D.	M.S.	B.S.	Assoc.	Ph.D.	M.S.	B.S.	Assoc.	
Professor	$45,000	$35,000	$27,300	$28,500	$43,500	$33,000	$32,000	$30,000	$38,000
Associate Professor	32,000	26,500	23,000	23,850	32,000	27,750	26,000	24,800	29,000
Assistant Professor	26,125	20,000	18,972	23,750	24,000	20,050	20,250	19,000	22,665
Instructor/Lecturer	20,300	22,658	18,568	22,000	21,000	18,000	28,000	24,000	21,000
Non-Faculty	25,000				25,500	15,000			25,000
Unranked	23,000	26,400	31,250		26,000			27,500	26,000
No Response	37,450	48,500	27,400		35,400	37,500	32,500	35,750	36,000
TOTAL	35,000	30,650	23,500	24,000	35,000	30,000	29,000	26,800	31,000

*Includes only members of the American Chemical Society.

TABLE 186

MEDIAN SALARIES OF Ph.D. CHEMISTS* EMPLOYED FULL-TIME IN COLLEGES AND UNIVERSITIES BY ACADEMIC RANK AND YEARS SINCE B. S., 1983

Years Since B. S.	ACADEMIC RANK							
	Professor	Associate Professor	Assistant Professor	Instructor/ Lecturer	Non-Faculty	Unranked	No Response	Total
5-9	$	$32,000	$21,750	$18,500	$23,336	$15,500	$35,400	$21,400
10-14	36,025	27,400	23,076	21,650	18,800	24,000	34,200	24,000
15-19	34,860	27,250	22,000	22,000	28,000	25,500	37,450	27,500
20-24	35,000	28,975	24,000	26,316	25,000	31,690	44,750	31,700
25-29	39,700	30,230	22,000	20,700	33,000	23,000	38,000	35,000
30-34	36,540	30,000	24,000		31,500	23,500	40,000	35,000
35-39	40,000	31,000	23,211			40,050	54,000	39,000
≥ 40	45,000	42,000	22,500			29,000		44,300
No Response	40,000	27,700	22,500	20,000	33,000	29,000	31,500	30,000
Total	38,000	29,000	22,665	21,000	25,000	26,000	36,000	31,000

* Includes only members of the American Chemical Society.

SOURCE: American Chemical Society, Salaries 1983 - Analysis of the American Chemical Society's 1983 Survey of Salaries and Employment, June 1983.

TABLE 187

MEDIAN SALARIES OF Ph.D. CHEMISTS* EMPLOYED FULL-TIME IN COLLEGES AND UNIVERSITIES BY WORK SPECIALTY AND YEARS SINCE B. S., 1983

WORK SPECIALTY	YEARS SINCE B. S.									
	5-9	10-14	15-19	20-24	25-29	30-34	35-39	≥ 40	No Response	Total
Biochemistry	$20,934	$25,000	$30,000	$34,500	$42,000	$39,250	$47,000	$50,600	$37,404	$34,000
Agricultural/Food	25,500	30,000	35,500	46,500	39,500	43,000	43,750	34,677	43,000	38,000
Analytical	21,600	22,471	26,000	28,000	35,770	31,000	33,250	34,400	30,500	27,950
Environmental	24,100	25,340	34,000	35,000	38,500	35,000	37,000	52,000	30,000	32,000
Organic	21,600	22,500	25,700	31,000	34,900	33,508	36,770	40,000	25,389	30,000
Inorganic	20,000	23,750	27,100	30,000	32,400	34,000	31,000	41,000	24,500	29,000
Pharm./Med./Clinical	27,500	31,100	35,000	43,556	41,450	45,000	43,150	50,000	35,000	36,000
Physical	20,200	22,350	27,400	30,000	35,000	35,000	38,000	43,500	25,000	32,000
Theoretical	20,850	27,266	23,000	36,000	30,000	31,000	26,000	60,000		30,000
Polymer/Macromolecular	24,500	22,000	28,500	42,000	40,700	45,000	39,000	45,000	48,000	36,000
Other Chemical		22,000	23,500	33,600	38,000	26,800	49,500	40,775	37,000	34,300
Total	21,400	24,000	27,500	31,700	35,000	35,000	39,000	44,300	30,000	31,000

* Includes only members of the American Chemical Society.

SOURCE: American Chemical Society, Salaries 1983 - Analysis of the American Chemical Society's 1983 Survey of Salaries and Employment, June 1983.

TABLE 188

MEDIAN ANNUAL SALARIES OF CHEMISTS* EMPLOYED IN COLLEGES AND UNIVERSITIES BY DEGREE LEVEL, SEX AND YEARS SINCE B.S., 1983

YEARS OF EXPERIENCE	MASTER'S			Ph.D.		
	Men	Women	Total	Men	Women	Total
2-4	$15,000	$12,000	$13,500	$	$	$
5-9	18,130	17,830	18,130	21,850	19,900	21,400
10-14	25,000	15,000	22,500	24,600	22,595	24,000
15-19	24,250	19,000	23,880	28,000	26,000	27,500
20-24	27,625		27,625	32,000	27,000	31,700
25-29	29,600	21,250	29,300	35,800	25,000	35,000
30-34	28,860	22,000	28,000	35,000	33,199	35,000
35-39	37,000	21,320	29,800	40,000	30,850	39,000
≥ 40	28,370	27,250	27,870	45,000	35,000	44,300
Overall	27,000	21,000	25,750	32,000	26,000	31,000

* Includes only members of the American Chemical Society.

NOTE: Blanks indicate no respondents.

SOURCE: American Chemical Society, Unpublished data from the 1982 Survey of ACS Members.

TABLE 189

MEAN ANNUAL SALARIES OF DOCTORAL BIOCHEMISTS EMPLOYED IN COLLEGE/UNIVERSITY BY TYPE OF INSTITUTION AND RANK

TYPE OF INSTITUTION		RANK					
		No. Responding	Professor	No. Responding	Associate Professor	No. Responding	Assistant Professor
Private School							
Highest Degree Offered	Ph.D.	36	$49,449	22	$33,590	20	$28,780
	M.S.	3	35,865	2	22,250	2	19,975
	B.S.	11	29,186	7	21,300	5	17,572
Public School							
Highest Degree Offered	Ph.D.	81	47,812	31	33,524	30	26,423
	M.S.	7	28,390	3	23,902	1	29,000
	B.S.	4	32,935	2	24,580	3	18,500

SOURCE: American Psychological Association, 1982-83 Faculty Salaries in Graduate Departments of Psychology.

TABLE 190

NUMBER AND MEDIAN 9 MONTH SALARIES OF FULL-TIME FACULTY IN U.S. DOCTORAL DEPARTMENTS OF PSYCHOLOGY BY GEOGRAPHIC REGION, RANK AND YEARS IN RANK, 1982-83

GEOGRAPHIC REGION	ACADEMIC RANK AND YEARS IN RANK										
	Full Professor				Associate Professor			Assistant Professor		Lecturer or Instructor	
	12+ Years	6-11 Years	3-5 Years	0-2 Years	6+ Years	3-5 Years	0-2 Years	3+ Years	0-2 Years	3+ Years	0-2 Years
NEW ENGLAND (12 Departments)											
Number	56	43	13	22	33	13	26	21	31	1	3
Median	$45,550	$37,300	$32,600	$31,850	$29,200	$27,200	$25,000	$23,200	$21,000	$	$16,000
MIDDLE ATLANTIC (25 Departments)											
Number	109	67	27	40	91	39	59	81	47	3	8
Median	44,000	41,000	37,900	34,250	30,700	28,800	27,000	22,900	21,100	25,600	20,500
EAST NORTH CENTRAL (32 Departments)											
Number	147	140	57	52	105	46	67	81	96	2	13
Median	40,300	36,600	33,200	31,600	28,600	26,650	24,500	22,200	20,100	18,400	19,500
WEST NORTH CENTRAL (14 Departments)											
Number	69	43	21	18	23	32	22	30	27	1	2
Median	39,000	32,600	31,800	30,150	27,800	26,500	23,850	20,500	18,700		20,750
SOUTH ATLANTIC (26 Departments)											
Number	114	80	51	32	94	56	66	88	74	2	6
Median	43,350	36,300	33,400	32,200	27,900	26,600	24,500	21,600	20,150	22,000	18,300
EAST SOUTH CENTRAL (12 Departments)											
Number	44	29	15	9	31	20	16	15	39	0	2
Median	37,500	32,600	34,300	31,800	24,800	23,800	24,150	22,200	19,100		19,500
WEST SOUTH CENTRAL (16 Departments)											
Number	60	36	11	17	43	26	27	28	41	1	4
Median	38,850	37,850	35,000	32,900	27,500	27,900	26,100	22,350	20,000		18,500
MOUNTAIN (11 Departments)											
Number	44	51	15	12	36	22	29	16	31	2	1
Median	38,850	36,000	35,000	29,450	28,000	26,750	23,800	23,550	20,200	24,000	
PACIFIC (14 Departments)											
Number	65	54	26	29	24	27	22	19	23	0	3
Median	43,600	36,900	33,200	30,100	27,300	27,500	24,600	21,700	21,000		20,300

SOURCE: American Psychological Association, 1982-83 Faculty Salaries in Graduate Departments of Psychology.

TABLE 191

NUMBER AND MEDIAN 9 MONTH SALARIES OF FULL-TIME FACULTY IN U.S. MASTER'S DEPARTMENTS OF PSYCHOLOGY BY GEOGRAPHIC REGION, RANK AND YEARS IN RANK, 1982-83

GEOGRAPHIC REGION	ACADEMIC RANK AND YEARS IN RANK										
	Full Professor				Associate Professor			Assistant Professor		Lecturer or Instructor	
	12+ Years	6-11 Years	3-5 Years	0-2 Years	6+ Years	3-5 Years	0-2 Years	3+ Years	0-2 Years	3+ Years	0-2 Years
NEW ENGLAND (7 Departments)											
Number	7	8	1	7	13	1	5	10	8	1	0
Median	$36,000	$32,900	$	$28,900	$28,100	$	$24,500	$25,100	$20,350	$	$
MIDDLE ATLANTIC (22 Departments)											
Number	30	48	9	7	45	20	8	24	19	1	2
Median	35,800	35,800	32,000	31,000	29,600	26,450	26,750	26,400	21,100		21,100
EAST NORTH CENTRAL (20 Departments)											
Number	39	40	20	18	42	28	29	33	31	2	1
Median	35,400	31,550	29,400	28,300	27,750	24,450	22,100	20,800	18,500	18,850	
WEST NORTH CENTRAL (11 Departments)											
Number	9	14	7	3	10	11	9	22	19	1	3
Median	29,000	34,000	33,600	26,400	26,000	24,100	23,500	22,200	20,000		17,200
SOUTH ATLANTIC (27 Departments)											
Number	30	36	16	21	50	31	41	48	35	4	6
Median	31,550	30,300	29,800	29,000	25,950	24,800	22,800	20,000	18,800	14,650	16,850
EAST SOUTH CENTRAL (11 Departments)											
Number	13	12	9	13	20	21	8	13	10	1	3
Median	30,800	29,600	28,500	27,100	26,300	24,400	23,150	19,000	17,900		
WEST SOUTH CENTRAL (14 Departments)											
Number	16	15	5	3	19	13	12	17	11	1	6
Median	33,000	32,700	34,000	28,700	26,400	26,000	26,100	25,000	23,800		18,850
MOUNTAIN (6 Departments)											
Number	8	4	4	4	2	5	4	6	7	0	0
Median	31,100	30,950	27,250	24,200	25,900	23,800	22,250	21,850	18,500		
PACIFIC (19 Departments)											
Number	65	79	32	22	38	30	17	15	13	0	6
Median	36,500	36,500	33,300	30,300	28,900	27,300	25,100	22,900	22,900		19,900

SOURCE. American Psychological Association, 1982-83 Faculty Salaries in Graduate Departments of Psychology.

TABLE 192

NUMBER AND MEDIAN 9 MONTH SALARIES OF FULL-TIME FACULTY IN U.S. DOCTORAL DEPARTMENTS OF PSYCHOLOGY BY TYPE OF DEPARTMENT, RANK AND YEARS IN RANK, 1982-83

DEPARTMENT	ACADEMIC RANK AND YEARS IN RANK										
	Full Professor				Associate Professor			Assistant Professor		Lecturer or Instructor	
	12+ Years	6-11 Years	3-5 Years	0-2 Years	6+ Years	3-5 Years	0-2 Years	3+ Years	0-2 Years	3+ Years	0-2 Years
PSYCHOLOGY (162 Departments)											
Number	708	543	236	231	480	281	334	379	409	12	42
Median	$42,000	$36,800	$33,750	$31,900	$28,300	$27,000	$24,900	$22,100	$20,100	$20,600	$19,750
EDUCATIONAL PSYCHOLOGY (24 Departments)											
Number	63	78	26	15	41	26	28	21	19	2	6
Median	38,000	33,250	31,300	30,000	28,100	27,200	24,800	22,300	20,000	21,000	12,000
COUNSELING PSYCHOLOGY (181 Departments)											
Number	32	29	13	9	28	15	8	14	17	1	0
Median	38,600	33,300	33,400	30,400	28,700	28,200	25,400	22,200	18,400		
HUMAN DEVELOPMENT (6 Departments)											
Number	12	14	2	5	18	7	6	11	8	6	5
Median	42,000	39,200	33,800	37,500	29,500	27,500	27,550	23,300	21,050	16,100	13,900
PROFESSIONAL SCHOOL (10 Departments)											
Number	9	7	4	13	5	11	10	9	19	0	0
Median	42,000	43,200	25,200	36,000	27,700	26,200	23,350	25,000	20,500		
OTHER* (13 Departments)											
Number	18	24	7	11	17	10	19	25	16	0	2
Median	40,650	40,950	34,500	30,800	28,500	29,800	28,500	22,600	22,200		

* This is a heterogeneous category which includes, for example, school psychology, biological psychology, interdisciplinary programs, etc.

SOURCE: American Psychological Association, Salaries in Psychology 1982, August 1982.

TABLE 193

MEDIAN AND MEAN 9-10 MONTH SALARIES FOR DOCTORAL-LEVEL PSYCHOLOGISTS† IN FACULTY POSITIONS BY EMPLOYMENT SETTING AND ACADEMIC RANK, 1982

EMPLOYMENT SETTING	ACADEMIC RANK							
	Full Professor		Associate Professor		Assistant Professor		Lecturer/Instructer	
	Median	Mean	Median	Mean	Median	Mean	Median	Mean
University Psychology Department	$35,000	$35,955	$25,000	$25,094	$20,000	$20,427	$20,000	$20,714
University Education Department	34,000	34,594	25,000	25,872	20,000	20,329		
University Business School or Department	37,000	38,824	30,000	30,262	27,000	26,667		
University Other Academic Department	35,000	37,043	26,000	27,179	21,000	20,988		
University Student Counseling Center*	33,000	31,929			21,000	20,800		
University Research Center or Institute*	40,500	40,100	28,000	27,000	25,000	22,800		
University, Other Setting	37,500	36,700						
Four Year College Psychology Department	29,000	29,535	23,000	23,372	18,000	18,379	17,000	16,800
Four Year College Education Department	31,000	33,900	25,000	26,273	19,500	20,900		
Four Year College Business School or Department					23,500	24,333		
Four Year College Other Academic Department	30,000	29,167	25,000	23,889	19,000	18,857		
Two Year College	30,000	30,421	26,000	26,619	21,000	22,000	25,000	24,765
Medical School Psychiatry Department*	41,000	42,375	32,000	32,585	25,000	26,236	20,000	20,231
Medical School, Other Department*	38,000	39,051	29,500	30,857	23,000	24,137		
Professional School*	35,000	39,222	27,000	28,727	20,000	20,800		

† Members of the American Psychological Association.

* These settings typically pay their faculty salaries on an 11-12 month basis. Therefore, the 9-10 month salaries reported here may be converted to 11-12 month salaries by multiplying by 11/9.

NOTE: Blanks indicate fewer than 5 respondents.

SOURCE: American Psychological Association, 1982-83 Faculty Salaries in Graduate Departments of Psychology, January 1983.

TABLE 194

NUMBER, MEDIAN AND MEAN 9-MONTH SALARIES OF FULL-TIME FACULTY IN UNITED STATES DEPARTMENTS OF PSYCHOLOGY BY RANK, TYPE OF DEPARTMENT AND YEARS IN RANK, 1982-83

YEARS IN RANK AND TYPE OF DEPARTMENT	Full Professor			Associate Professor			Assistant Professor			Lecturer or Instructor		
	Number	Median	Mean	Number	Median	Mean	Number	Median	Mean	Number	Median	Mean
AT LEAST 12 YEARS												
Doctoral	842	$41,200	$42,032		$	$		$	$		$	$
Master's	217	35,600	34,362									
6-11 YEARS												
Doctoral	695	36,300	36,989									
Master's	256	34,000	33,343									
AT LEAST 6 YEARS												
Doctoral				589	28,400	28,335						
Master's				239	27,600	27,502						
3-5 YEARS												
Doctoral	288	33,400	33,992	350	27,000	27,318						
Master's	103	31,100	30,930	160	25,200	25,396						
AT LEAST 3 YEARS												
Doctoral							459	22,200	22,308	21	20,000	20,014
Master's							188	22,000	22,256	11	18,300	18,018
LESS THAN 3 YEARS												
Doctoral	284	31,850	32,553	405	25,000	25,576	488	20,100	20,569	55	19,300	18,509
Master's	98	29,000	29,243	133	23,600	24,162	153	19,500	19,908	27	18,300	18,507

SOURCE: American Geological Institute, AGI Survey of Faculty Salaries - 1982, April 1982.

TABLE 195

SALARIES OF GEOSCIENCE FACULTY BY RANK, 1982

RANK	High	Bulk of High Salary Clusters	Median of High Ranges	Low	Bulk of Low Salary Clusters	Median of Low Ranges
Assistant Professor	$39,762	$22,000-$25,000	$	$14,300	$19,000-$22,000	$
Associate Professor	37,000	26,000- 30,000	28,000	15,000	22,000- 24,000	23,500
Professor	63,800		39,000	20,000	27,000- 31,000	29,000

SOURCE: Engineering Manpower Commission of American Association of Engineering Societies, Salaries of Engineers in Education, 1982.

TABLE 196

NUMBER AND MEDIAN ANNUAL SALARIES OF FACULTY IN ALL ENGINEERING SCHOOLS ON NINE-MONTH CONTRACTS, BY RANK AND SELECTED YEARS SINCE BACCALAUREATE, 1982

RANK	YEARS SINCE BACCALAUREATE								
	5	7	9-11	15-17	18-20	21-23	24-26	27-29	33+
Professors	(1) $	(2) $	(9) $30,300	(341) $34,250	(599) $35,500	(789) $36,400	(810) $37,000	(740) $37,400	(1,490) $37,850
Associate Professors	(7) 26,600	(16) 27,500	(237) 28,450	(584) 29,000	(505) 28,900	(400) 28,700	(287) 28,450	(233) 28,200	(341) 27,800
Assistant Professors	(128) 24,800	(193) 25,150	(621) 25,300	(189) 24,850	(109) 24,500	(70) 24,150	(64) 23,900	(41) 23,700	(76) 23,450
Instructors	(31) 18,300	(31) 18,850	(70) 19,650	(33) 21,150	(27) 21,900	(24) 22,550	(9) 23,200	(11) 23,800	(36) 25,350
Researchers	(1)	(4)	(14) 20,700	(12) 25,500	(6) 27,350	(6) 28,650	(5) 29,500	(12) 29,850	(11) 29,600
Administrators	(0)	(0)	(2)	(13) 33,850	(17) 39,500	(30) 42,050	(37) 43,050	(32) 43,400	(59) 43,600

TABLE 197

NUMBER AND MEDIAN ANNUAL SALARIES OF FACULTY IN ALL ENGINEERING SCHOOLS ON TWELVE-MONTH CONTRACTS, BY RANK AND SELECTED YEARS SINCE BACCALAUREATE, 1982

RANK OR POSITION	YEARS SINCE BACCALAUREATE								
	7	9-11	12-14	15-17	18-20	21-23	24-26	27-29	33+
Professors	(0) $	(1) $	(3) $	(11) $47,750	(31) $44,850	(29) $44,200	(32) $44,750	(31) $45,900	(46) $49,450
Associate Professors	(0)	(18) 35,800	(20) 36,800	(36) 37,750	(31) 38,500	(19) 39,100	(8) 39,550	(6) 39,800	(6) 39,000
Assistant Professors	(5) 33,100	(38) 32,600	(35) 33,550	(26) 34,500	(15) 35,150	(7) 35,500	(4)	(1)	(0)
Researchers	(65) 21,950	(194) 23,700	(151) 25,450	(126) 27,200	(86) 28,850	(69) 30,450	(61) 31,800	(67) 32,850	(100) 33,500
Administrators	(1)	(3)	(24) 37,100	(60) 43,100	(100) 46,450	(168) 47,900	(160) 48,350	(124) 48,400	(198) 48,250

TABLE 198

NUMBER AND MEDIAN ANNUAL SALARIES OF FACULTY IN TECHNOLOGY SCHOOLS ON NINE-MONTH CONTRACTS, BY RANK AND SELECTED YEARS SINCE BACCALAUREATE, 1982

RANK	YEARS SINCE BACCALAUREATE								
	7	9-11	12-14	15-17	18-20	21-23	24-26	27-29	33+
Professors	(0) $	(1) $	(8) $30,200	(22) $29,400	(32) $29,150	(39) $29,250	(38) $29,600	(28) $30,100	(68) $31,750
Associate Professors	(2)	(23) 22,700	(32) 24,000	(46) 25,000	(52) 25,700	(48) 26,000	(44) 26,050	(28) 25,900	(47) 24,550
Assistant Professors	(13) 21,400	(44) 22,250	(52) 22,650	(50) 22,700	(31) 22,600	(18) 22,400	(21) 22,200	(25) 22,000	(22) 21,700
Instructors	(9) 19,100	(31) 19,850	(36) 20,550	(29) 21,150	(25) 21,700	(27) 22,150	(17) 22,500	(22) 22,750	(32) 22,450
Administrators*	(2)	(3)	(4)	(13) 36,000	(22) 35,900	(18) 35,600	(17) 35,850	(11) 35,900	(20) 36,550

* On 12-month contracts.

NOTE: Blanks indicate no median salaries computed for fewer than 5 respondents.

SOURCE: Engineering Manpower Commission of American Association of Engineering Societies, Salaries of Engineers in Education, 1982.

TABLE 199

NUMBER, MEDIAN AND MEAN SALARIES OF FACULTY IN ENGINEERING & TECHNOLOGY SCHOOLS BY RANK, TYPE OF INSTITUTION AND MONTHS ON CONTRACT, 1982

TYPE OF INSTITUTION	Professor	Associate Professor	Assistant Professor	Instructor	Researcher	Administrator
ENGINEERING SCHOOL, Ph.D. PROGRAM						
(9-10 Month Contract)						
Number	(4,933)	(2,730)	(1,986)	(317)	(87)	(191)
Median Salary	$37,400	$29,100	$25,300	$18,750	$25,250	$43,500
Mean Salary	38,250	29,350	25,400	20,150	26,000	43,550
(11-12 Month Contract)						
Number	(199)	(144)	(149)	(54)	(1,323)	(739)
Median Salary	$47,700	$38,750	$33,700	$29,000	$24,900	$49,500
Mean Salary	47,550	39,050	33,850	29,150	26,700	49,350
ENGINEERING SCHOOL, NON-Ph.D. PROGRAM						
(9-10 Month Contract)						
Number	(837)	(649)	(458)	(196)	(1)	(28)
Median Salary	$33,400	$26,700	$22,850	$20,550	$	$34,500
Mean Salary	33,300	26,650	23,250	21,350		34,050
(11-12 Month Contract)						
Number	(18)	(7)	(9)	(1)	(23)	(244)
Median Salary	$36,000	$32,250	$26,500	$	$27,500	$41,750
Mean Salary	35,200	32,050	26,300		28,000	41,200
TECHNOLOGY SCHOOLS						
(9-10 Month Contract)						
Number	(289)	(361)	(341)	(318)	(1)	(43)
Median Salary	$30,450	$25,300	$22,150	$20,950	$	$29,150
Mean Salary	30,850	25,450	23,250	21,700		30,600
(11-12 Month Contract)						
Number	(128)	(45)	(33)	(64)	(2)	(129)
Median Salary	$29,350	$30,250	$23,750	$21,400	$	$35,200
Mean Salary	31,750	29,300	24,100	20,850		35,150

NOTE: Blanks indicate no median/mean salaries computed for fewer than 5 respondents.

SOURCE: University of Florida, 1981-82 Engineering Faculty Salary Survey, January 1982.

TABLE 200

SALARIES OF ENGINEERING FACULTY ON 9-MONTH TERMS BY ACADEMIC RANK AND GEOGRAPHICAL AREA, 1981-82

ACADEMIC RANK	GEOGRAPHICAL AREA				
	Southeast	Northeast	Northwest	Southwest	Overall
Extraordinary Professors	$46,581	$45,866	$41,250	$47,329	$46,754
Professors	36,358	37,274	34,480	36,448	36,579
Associate Professors	28,606	28,793	26,733	28,782	28,601
Assistant Professors	24,474	24,477	23,264	25,315	24,662
Instructors	18,042	17,809	19,988	19,037	18,525

SOURCE: University of Florida, 1981-82 Engineering Faculty Salary Survey, January 1982.

TABLE 201

SALARIES OF ENGINEERING FACULTY ON 12-MONTH TERMS BY ACADEMIC POSITION AND GEOGRAPHICAL AREA, 1981-82

ACADEMIC POSITION	GEOGRAPHICAL AREA				
	Southeast	Northeast	Northwest	Southwest	Overall
Deans	$52,570	$51,961	$51,922	$56,066	$53,254
Associate Deans	49,284	43,530	45,944	54,181	47,890
Assistant Deans	43,034	33,958	40,613	46,980	40,008
Department Heads	49,690	49,632	46,278	48,005	48,972

SOURCE: American Institute of Chemical Engineers, "1982-83 Chemical Engineering Faculty Salary Survey," Chemical Engineering Progress, July 1983.

TABLE 202

NUMBER AND AVERAGE SALARIES OF FACULTY IN CHEMICAL ENGINEERING DEPARTMENTS BY GEOGRAPHICAL REGION AND ACADEMIC RANK, 1982-83

GEOGRAPHICAL REGION	ACADEMIC RANK									
	Professor		Associate Prof.		Assistant Prof.		Instructor		Department Heads	
	No.	Average Salary	No.	Average Salary	No.	Average Salary	No.	Average Salary	No.	Average Salary
New England	56	$43,905	42	$32,632	30	$27,737	4	$13,054	11	$46,755
Middle Atlantic	108	42,035	47	32,924	64	27,484	7	20,478	20	48,095
East North Central	101	42,540	28	33,952	43	28,625	3	20,173	17	47,524
West North Central	65	39,704	21	30,785	19	28,065	5	13,680	11	45,385
South Atlantic	67	39,902	25	31,275	44	27,867	4	20,447	14	44,071
East South Central	28	34,667	12	29,977	9	26,906	1	17,000	6	38,136
West South Central	80	42,308	29	33,747	31	29,722	4	9,975	13	47,426
Mountain	42	39,668	31	31,135	22	27,213			11	41,434
Pacific	42	41,692	13	29,625	11	27,469			8	40,973
All Regions	589	41,293	248	32,200	273	28,006	28	16,542	111	45,308

SOURCE: American Association of Colleges of Pharmacy, Annual Survey of Faculty Salaries, 1982-83.

TABLE 203

NUMBER AND AVERAGE CALENDAR YEAR SALARIES OF FACULTY IN COLLEGES OF PHARMACY BY DISCIPLINE AND ACADEMIC RANK, 1982-83

DISCIPLINE	ACADEMIC RANK											
	Dean		Ass't./Associate Dean		Professor		Associate Professor		Assistant Professor		Instructor	
	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary
Pharmacy/Pharmaceutics	27	$59,423	16	$49,537	80	$45,411	67	$35,414	73	$29,130	10	$24,838
Pharmacology/Toxicology	9	57,513	11	46,551	70	42,170	57	33,928	39	28,337		
Hospital Pharmacy							7	43,033	8	34,689		
Pharmacy Administration	13	53,939	17	42,015	24	42,674	33	34,381	36	29,044	11	26,859
Pharmaceutical/Medicinal Chemistry	12	55,140	18	43,934	92	45,789	61	34,063	38	27,921		
Clinical Pharmacy			13	40,847	28	41,654	152	35,374	264	27,684	32	22,371
Pharmacognosy			9	46,518	20	45,200	15	35,008	6	27,477		
Nuclear Pharmacy			*	*			5	37,005	8	29,171	*	*

* Data not submitted. NOTE: Blanks indicate insufficient data reported.

TABLE 204

NUMBER AND AVERAGE CALENDAR YEAR SALARIES OF FACULTY IN COLLEGES OF PHARMACY BY YEARS IN RANK AND ACADEMIC RANK, 1982-83

YEARS IN RANK	ACADEMIC RANK											
	Professor		Associate Professor		Assistant Professor		Dean*		Ass't./Associate Dean		Instructor	
	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary	No.	Salary
0-1	45	$38,926	64	$31,961	148	$26,815	8	$57,527	10	$41,508	16	$23,466
2-5	86	43,852	224	35,059	284	28,741	16	55,191	37	40,659	25	22,416
6-10	87	44,403	89	36,658	38	29,571	21	56,235	28	45,143	13	24,195
11-15	69	45,441	21	36,454	5	35,329	14	58,062	7	45,724	6	26,913
16-20	22	48,071					8	59,030	7	55,554		
21+	20	48,779	5	34,440								
Overall	332	44,194	409	34,986	485	28,277	71	56,912	93	44,075	64	23,565

* One dean did not submit data. NOTE: Totals do not add because all faculty did not report years in rank. Blanks indicate insufficient data reported.

SOURCE: American Assembly of Collegiate Schools of Business, AACSB Salary Survey, 1983.

TABLE 205

MEAN SALARIES OF BUSINESS FACULTY BY DISCIPLINE AND RANK, 1982-83

DISCIPLINE	Professor		Assoc. Professor		Ass't. Professor		Instructor		New Doctorate	
	Mean	% Incr. Over 1981	Mean	% Incr. Over 1981	Mean	% Incr. Over 1981	Mean	% Incr. Over 1981	Mean	% Incr. Over 1981
Accounting	$39,200	5.7	$31,900	7.0	$27,300	9.6	$20,100	2.6	$31,300	13.0
Economics	38,100	5.2	29,000	5.8	24,000	3.9	19,400	7.2	24,400	7.5
Finance	39,600	5.3	31,800	6.7	28,400	9.2	21,000	5.5	29,600	11.7
Management	36,700	0.0	29,800	4.2	25,500	4.5	19,400	-1.5	26,800	6.3
Marketing	38,700	6.0	31,100	5.8	26,500	8.6	20,100	7.5	27,000	3.4
Quantitative Methods	38,400	3.8	30,800	6.6	27,000	10.7	20,400	9.7	28,400	10.1
Business Education*	32,600		26,100		22,100		17,400		23,100	
Business Law*	34,500		28,300		23,700		18,400		23,200	
Information Systems*	38,000		30,800		26,000		19,800		30,000	
Production/Operations Management/ Managerial Economics*	38,200		31,700		27,700		21,500		28,300	

* New categories in 1982-83 report.

TABLE 206

MEAN SALARIES OF ADMINISTRATIVE PERSONNEL ON BUSINESS FACULTIES BY TYPE OF INSTITUTION AND POSITION TITLE, 1982-83

TYPE OF INSTITUTION	Dean		Assoc. Dean		Ass't. Dean		Chairperson	
	Mean	% Incr. Over 1981	Mean	% Incr. Over 1981	Mean	% Incr. Over 1981	Mean	% Incr. Over 1981
Public	$52,500	9.1	$46,600	5.4	$35,200	9.0	$41,600	6.9
Private	54,500	10.8	46,800	12.8	31,500	12.5	39,600	9.1
Accredited	57,400	7.9	47,600	7.9	35,200	10.7	43,400	5.3
Non-Accredited	46,400	6.7	40,400	-1.2	30,000	5.6	35,500	6.0

SOURCE: College and University Personnel Association, 1982-83 Administrative Compensation Survey, February 1983.

TABLE 207

NUMBER AND MEDIAN SALARIES PAID TO ADMINISTRATIVE OFFICERS IN HIGHER EDUCATION INSTITUTIONS BY POSITION AND CONTROL, 1982-83

POSITION	ALL INSTITUTIONS		MEDIAN SALARY	
	Number	Salary	Public	Private
Chief Executive Officer, System	134	$66,725	$65,950	$72,000
Chief Executive Officer, Single Institution	1,310	55,624	55,693	55,400
Executive Vice President	291	49,000	50,000	45,510
Chief Academic Officer	1,310	44,136	47,000	40,000
Chief Business Officer	1,355	41,712	43,500	38,500
Chief Student Affairs Officer	1,309	36,750	40,000	31,000
Chief Development Officer	752	37,508	39,234	36,000
Chief Public Relations Officer	742	27,666	32,000	24,250
Chief Planning Officer	216	38,580	40,140	32,760
Chief, Personnel/Human Resources	660	31,500	33,460	27,500
Chief Health Professions Officer	106	53,920	52,545	60,500
Chief Budgeting Officer	407	35,210	35,492	33,400
Director, Legal Services	170	43,000	42,420	48,400
Registrar	1,192	27,500	31,000	23,165
Director, Church Relations				21,150
Director, Learning Resources Center	523	28,185	30,439	20,568
Director, Library Services	1,129	30,370	34,469	25,641
Director, Computer Services	901	32,427	34,740	28,250
Director, Educational Media Services	491	24,600	27,328	18,950
Director, Institutional Research	477	31,805	33,000	27,000
Director, Special & Deferred Gifts	115	29,282	28,827	29,400
Administrator, Grants & Contracts	390	33,500	34,254	28,355
Director, Affirmative Action/Equal Employment	328	30,632	30,653	30,500
Chaplain	260	20,575		20,000
Comptroller	801	33,000	34,857	30,100
Director, Internal Audit	307	30,440	30,779	28,600
Bursar	334	22,900	25,168	20,809
Director, Food Services	368	26,750	28,091	25,500
Director, Physical Plant	1,050	32,000	34,017	28,250
Director, Purchasing	698	25,700	27,224	23,000
Director, Bookstore	847	18,740	21,555	15,500
Director, Campus Security	761	23,764	26,000	20,196
Director, Information Systems	211	35,800	36,700	33,300
Director, News Bureau	253	22,260	24,728	19,425
Director, Auxiliary Services	290	31,779	33,228	29,500
Director, Admissions	1,012	28,999	30,197	27,500
Director, Foreign Students	154	24,515	25,570	22,500
Director, International Studies Education	123	32,540	33,820	26,000
Director, Student Financial Aid	1,208	25,100	27,800	21,200
Director, Student Placement	860	24,274	27,307	20,950
Director, Student Counseling	814	28,200	30,499	23,000
Director, Student Union	420	26,200	28,830	20,100
Director, Student Health Services (Physician Admin.)	324	48,530	51,135	38,000
Director, Student Health Services (Nurse Admin.)	496	16,640	20,719	14,300
Director, Student Housing	633	22,470	26,747	18,500
Director, Athletics	805	31,710	34,750	27,950
Director, Campus Recreation/Intermurals	330	22,260	23,517	19,200
Director, Alumni Affairs	649	23,276	25,560	21,000

SOURCE: College and University Personnel Association, 1982-83 Administrative Compensation Survey, February 1983.

TABLE 207 (continued)

NUMBER AND MEDIAN SALARIES PAID TO ADMINISTRATIVE OFFICERS IN HIGHER EDUCATION INSTITUTIONS BY POSITION AND CONTROL, 1982-83

POSITION	ALL INSTITUTIONS		MEDIAN SALARY	
	Number	Salary	Public	Private
Director, Information Office	367	$25,629	$26,520	$23,345
Director, Community Services	280	29,092	30,365	22,000
Administrator, Hospital Medical Center	48	64,950	63,000	80,000
Chief Planning & Budget Officer	84	45,600	45,600	45,800
Chief Development & Public Relations Officer	167	42,000	41,262	42,000
Director, Personnel & Affirmative Action	213	28,836	28,836	27,901
Director, Admissions & Financial Aid	113	31,152	28,902	33,100
Director, Housing & Food Services	44	38,000	38,000	32,700
Director, Development & Alumni Affairs	85	34,419	35,456	30,000
Dean, Architecture	67	51,520	51,350	55,000
Dean, Agriculture	95	48,072	48,859	
Dean, Arts and Letters	104	40,000	41,600	38,678
Dean, Arts and Sciences	371	46,500	46,500	46,119
Dean, Business	599	43,337	43,600	42,900
Dean, Communications	97	35,925	34,723	41,000
Dean, Continuing Education	552	35,037	36,834	30,000
Dean, Dentistry	53	70,000	68,500	73,500
Dean, Education	407	44,646	45,799	34,600
Dean, Engineering	230	54,054	52,041	59,040
Dean, Experimental Programs				23,220
Dean, Extension	77	41,000	41,000	39,000
Dean, Fine Arts	170	41,920	43,977	30,419
Dean, Graduate Programs	364	45,860	47,160	39,000
Dean, Health Related Professions	179	38,200	38,420	35,500
Dean, Home Economics	68	45,516	46,700	23,303
Dean, Humanities	194	34,200	35,896	24,109
Dean, Instruction			42,650	
Dean, Law	138	67,787	64,835	69,875
Dean, Library & Information Sciences	74	43,500	43,500	43,500
Dean, Mathematics	111	33,608	35,300	24,046
Dean, Medicine	81	86,700	83,968	113,000
Dean, Music	94	38,000	42,165	33,900
Dean, Nursing	299	39,000	40,020	36,100
Dean, Occupational Studies/Voc. Educ./Technology	231	37,576	37,745	22,700
Dean, Pharmacy	58	56,460	56,460	56,160
Dean, Public Health				89,000
Dean, Sciences	258	35,730	38,650	26,520
Dean, Social Sciences	228	33,085	35,000	25,066
Dean, Social Work	73	50,200	50,400	46,000
Dean, Special Programs	97	32,556	33,018	29,550
Dean, Undergraduate Programs	93	41,000	42,090	40,000

SOURCE: College and University Personnel Association, 1982-83 Administrative Compensation Survey, February 1983.

TABLE 208

NUMBER AND MEDIAN SALARIES PAID TO ADMINISTRATIVE OFFICERS IN HIGHER EDUCATION INSTITUTIONS BY POSITION, MINORITY/NON-MINORITY STATUS AND SEX, 1982-83

POSITION	Non-Minority		Minority		Men		Women	
	No.	Salary	No.	Salary	No.	Salary	No.	Salary
Chief Executive Officer, System	122	$67,000	9	$62,500		$		$
Chief Executive Officer, Single Institution	1,209	56,000	80	52,600	1,193	56,120	102	46,261
Executive Vice President	257	49,810	21	43,575	269	49,810	13	41,239
Chief Academic Officer	1,203	44,728	74	42,120	1,116	45,000	168	39,200
Chief Business Officer	1,251	41,980	68	38,139	1,251	42,070	78	32,000
Chief Student Affairs Officer	1,123	36,500	149	39,527	1,033	38,000	247	31,970
Chief Development Officer	693	38,000	29	32,647	619	38,508	110	30,000
Chief Public Relations Officer	691	27,894	29	27,285	433	32,797	293	22,724
Chief Planning Officer	193	39,153	18	32,952	168	40,000	43	33,296
Director, Personnel/Human Resources	577	31,500	67	32,439	428	34,920	220	24,600
Chief Health Professions Officer					73	69,261	32	30,976
Chief Budgeting Officer	370	35,536	33	29,407	334	36,032	71	28,288
Director, Legal Services	155	43,500	10	36,002	133	43,740	34	41,990
Registrar	1,091	27,588	73	26,700	727	30,718	445	22,243
Director, Church Relations					68	21,800	8	14,850
Director, Learning Resources Center	473	28,102	39	30,439	329	30,646	186	23,505
Director, Library Services	1,024	30,816	73	27,953	689	33,931	419	25,498
Director, Computer Center	828	32,427	50	30,500	788	33,420	93	22,500
Director, Educational Media Services	439	24,602	33	23,720	389	25,775	86	18,735
Director, Institutional Research	423	31,900	41	28,536	321	33,750	145	26,300
Director, Special & Deferred Gifts					86	30,000	22	26,155
Administrator, Grants & Contracts	347	34,100	33	27,115	281	36,000	100	24,782
Director, Affirmative Action/ Equal Employment	161	28,687	160	32,000	120	32,400	200	28,687
Comptroller	750	33,378	32	32,000	665	34,464	120	24,000
Director, Internal Audit	269	30,925	27	27,000	249	31,634	51	24,300
Bursar	301	23,311	25	20,500	185	27,125	143	19,026
Director, Food Services	337	26,850	22	21,950	250	28,537	110	21,075
Chief Physical Plant/ Facilities Management Officer	976	32,300	50	30,947	1,019	32,100	11	21,715
Director, Purchasing	644	26,003	41	20,720	532	27,894	155	18,252
Director, Bookstore	776	18,934	54	18,200	434	23,820	400	14,850
Director, Campus Security	649	23,800	95	23,609	726	24,000	21	16,144
Director, Information Systems	193	36,000	13	29,820	172	36,500	36	26,814
Director, News Bureau	237	22,341	7	18,186	129	24,752	117	19,884
Director, Auxiliary Services	264	32,200	22	26,736	250	33,500	37	20,000
Director, Admissions	514	29,362	62	26,570	764	30,145	221	24,600
Director, Foreign Students	133	24,636	19	23,675	102	26,059	50	19,812
Director, International Studies Education	115	32,849	5	27,588	86	34,598	35	24,000
Director, Student Financial Aid	1,011	25,000	164	26,568	763	27,500	422	20,800
Director, Student Placement	760	24,446	70	23,605	471	27,195	366	21,021
Director, Student Counseling	705	28,312	84	26,700	535	29,750	260	23,180
Director, Student Union	376	26,500	36	23,400	334	27,925	81	19,600
Director, Student Health Services (Physician Admin.)	291	49,175	25	37,092	247	49,268	69	42,191
Director, Student Health Services (Nurse Admin.)	443	16,536	42	18,624	5	20,000	482	16,640
Director, Student Housing	567	22,660	50	20,723	391	25,942	231	18,011
Director, Athletics	742	32,150	44	29,910	747	32,316	44	20,079

SOURCE: College and University Personnel Association, 1982-83 Administrative Compensation Survey, February 1983.

TABLE 208 (continued)

NUMBER AND MEDIAN SALARIES PAID TO ADMINISTRATIVE OFFICERS IN HIGHER EDUCATION INSTITUTIONS BY POSITION, MINORITY/NON-MINORITY STATUS AND SEX, 1982-83

POSITION	Non-Minority		Minority		Men		Women	
	No.	Salary	No.	Salary	No.	Salary	No.	Salary
Director, Campus Recreation/ Intermurals	294	$22,269	27	$24,000	264	$23,100	58	$17,800
Director, Alumni Affairs	596	23,500	30	21,000	333	26,500	297	19,600
Director, Information Office	347	25,848	9	20,525	188	28,000	169	22,877
Director, Community Services	242	28,147	32	32,410	162	31,112	113	25,434
Director, Risk Management and Insurance					69	31,039	12	26,413
Chief Planning & Budget Officer					77	45,600	7	48,356
Chief Development & Public Relations Officer					133	43,600	28	34,642
Director, Personnel & Affirmative Action	169	29,066	37	28,500	123	31,132	83	22,000
Director, Admissions & Financial Aid					95	35,100	17	20,568
Director, Housing & Food Services					36	38,000	6	30,580
Director, Development & Alumni Affairs	78	33,854	6	31,069	73	36,155	11	26,203
Director, Publications	286	23,692	10	24,500	137	27,300	159	21,350
Dean, Agriculture	85	52,500	8	36,247				
Dean, Arts and Letters	94	41,600	7	38,678	79	42,292	23	33,000
Dean, Arts and Sciences	338	47,550	21	41,009	325	47,640	34	41,009
Dean, Business	544	44,523	38	34,000	521	45,073	61	31,670
Dean, Communications	87	35,750	7	35,925	75	37,856	21	31,350
Dean, Continuing Education	502	35,037	37	36,621	424	36,750	119	29,008
Dean, Education	358	45,307	38	38,135	333	45,516	65	36,618
Dean, Engineering	213	54,348	13	49,888				
Dean, Experimental Programs					15	42,000	5	23,547
Dean, Extension	70	41,000	6	38,933	67	41,725	9	32,798
Dean, Fine Arts	157	42,500	8	31,022	147	43,872	20	26,589
Dean, Graduate Programs	331	45,860	25	48,000	308	46,625	50	42,100
Dean, Health Related Professions	153	38,184	17	41,564	102	43,000	69	36,370
Dean, Home Economics	60	46,700	6	26,477	12	51,500	55	43,746
Dean, Humanities	173	34,500	16	32,507	145	35,524	46	28,780
Dean, Instruction					27	42,900	5	31,062
Dean, Library & Information Sciences	65	43,500	6	38,000	55	47,192	16	38,275
Dean, Mathematics	97	33,686	8	22,790	92	33,686	15	28,258
Dean, Music	81	39,990	9	32,000	84	39,000	8	25,162
Dean, Nursing	268	39,056	25	38,500	10	34,976	284	39,156
Dean, Occupational Studies/ Voc. Educ./Technology	205	37,752	13	37,458	203	37,835	19	35,626
Dean, Sciences	229	35,730	22	36,494	224	36,500	30	30,174
Dean, Social Sciences	193	33,444	27	29,467	186	33,463	36	26,000
Dean, Social Work	56	50,200	16	47,000	54	50,200	18	46,420
Dean, Special Programs	71	31,819	23	33,662	59	33,100	37	30,937
Dean, Undergraduate Programs					68	41,711	20	41,207

SOURCE: National Education Association, Estimates of School Statistics 1982-83, January 1983.

TABLE 209

ESTIMATED AVERAGE ANNUAL SALARIES OF ELEMENTARY AND SECONDARY INSTRUCTIONAL STAFF AND PUBLIC SCHOOL CLASSROOM TEACHERS BY STATE, 1982-83

STATE	Instructional Staff	CLASSROOM TEACHERS		
		Elementary School	Secondary School	All Teachers
United States	$21,520	$20,042	$21,100	$20,531
Alabama	18,450	17,400	18,000	17,850
Alaska	35,411	33,784	34,154	33,953
Arizona	19,534	18,637	19,318	18,849
Arkansas	15,653	14,789	15,548	15,176
California	26,252	23,240	24,538	23,555
Colorado	21,473	20,267	21,453	21,500
Connecticut	21,600	20,700	20,800	20,300
Delaware	21,453	20,062	21,166	20,665
District of Columbia	26,922	26,068	26,021	26,048
Florida	19,621	18,720	18,124	18,538
Georgia	18,282	17,111	17,847	17,412
Hawaii	25,423	25,335	24,024	24,796
Idaho	18,229	16,892	18,255	17,549
Illinois	23,347	21,747	24,242	22,618
Indiana	20,873	19,657	20,483	20,067
Iowa	19,269	17,978	19,361	18,709
Kansas	19,169	18,213	18,385	18,299
Kentucky	18,230	17,850	19,150	18,400
Louisiana	19,749	18,810	19,690	19,265
Maine	16,205	15,288	16,604	15,772
Maryland	23,773	21,780	23,142	22,786
Massachusetts	23,000	18,781	19,165	19,000
Michigan	23,744	23,732	24,217	23,965
Minnesota	23,313	21,450	23,068	22,296
Mississippi	14,773	14,049	14,571	14,285
Missouri	18,410	17,268	18,192	17,726
Montana	20,150	18,786	20,314	19,463
Nebraska	18,488	16,650	18,173	17,412
Nevada	26,412	20,585	21,306	20,944
New Hampshire	15,616	15,250	15,471	15,353
New Jersey	22,684	21,244	22,175	21,642
New Mexico	21,168	20,290	21,000	20,600
New York	25,600	24,300	25,700	25,100
North Carolina	18,327	17,847	17,754	17,836
North Dakota	18,830	17,680	19,110	18,390
Ohio	21,010	19,850	21,020	20,360
Oklahoma	18,670	17,660	18,600	18,110
Oregon	23,328	21,872	23,136	22,334
Pennsylvania	21,800	20,500	21,300	21,000
Rhode Island	23,600	24,070	22,154	23,175
South Carolina	18,980	15,890	17,040	16,380
South Dakota	16,493	15,386	15,988	15,595
Tennessee	17,743	17,369	17,517	17,425
Texas	20,300	19,000	20,100	19,500
Utah	20,339	19,078	20,615	19,677
Vermont	15,003	14,877	15,778	15,338
Virginia	19,492	18,020	19,655	18,707
Washington	24,470	22,977	23,923	23,413
West Virginia	17,996	17,290	17,479	17,370
Wisconsin	21,490	20,480	21,470	20,940
Wyoming	23,047	22,740	24,293	24,000

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